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White Turnips, What they are worth.

The experience of the past season of hardship, of
want of feed, of high prices, we hope will not be
readily forgotten by farmers. It ought not. There
is no good reason why in this state, farmers should
be obliged to keep their stock on short allowance.
The only reason for it is bad management, want of
foresight, and neglect to use the means which exist
within reach at all times. Hard as the winter has
been, there are not a few farms on which great piles
of straw may yet be found rotting in the field where
it has been left since it was thrashed out. Had the
owners grown an acre or two of turnips, would they
not have been able to have kept their stock in bet-
ter order, and would they not also have turned out a
greater amount of wool, beef, mutton, and butter,
than they have done? Would they not also have
brought all their stock into the pasture in better
condition than they actually have done this spring?
And more than all, would they not have had a greater
amount of the best manure, than their now half de-
cayed heap of straw can possibly yield? These are
questions worth looking at, when grumbling over the
amount of care and work necessary to secure a crop
of turnips?

We believe it is Old Tusser who sings the follow-
ing stave, which shows that even in his time (200
years ago) a thorough preparation of the ground was
necessary to grow turnips. He says:

Where clouds prevail,
Turnips fail.

Every farmer will recognize the truth of this max-
im, if he has ever attempted to grow turnips on half
tilled, no-manured land. Whatever may be the con-
dition of the land selected on which turnips are to be
grown, before the seed is sown, the soil should first
be well tilled, even if it delays the sowing of the seed
a week or ten days. Again if the land is right before
the seed is sown, there is no necessity to wait for
rain, as it many times happens that farmers imagine
they must, or the seed will not sprout. If the land
is a fallow which has been plowed already, the culti-
vator should be put through it both ways once in

every ten days for a month previous to sowing, and if there should be many clods, the roller should be applied. Where a wheat stubble is selected, the plough should be run deep, and if possible cover in with the stubble from ten to twenty good two horse loads of barnyard manure; after this plowing, give the two acres a cross plowing with a gang plow, or cultivate it with a deep working cultivator that will readily cover in a top dressing of another ten loads of manure. This done, harrow and roll, and then harrow again with a fine toothed harrow, and give the whole two acres a top dressing of of three bushels of plaster, three bushels of ashes, and two bushels of fine salt, well mixed together, and sow as soon as possible at the rate of one pound of seed per acre. This is for broad cast sowing, as it is not every farmer in this state that has a drill or can procure one.

Of the varieties which we would recommend, the *White Stone Globe Turnip*, the *Green-top White* and *Dales Hybrid Yellow*, seem best suited for this climate. The *White Stone Globe*, is the hardiest of all the white sorts and withstands early frosts well. The *Green Globe* is a variety which also withstands frosts well, is globular in shape, and has a small neck and tap root; it is much used to feed milch cattle and young growing animals. *Dales Hybrid Yellow* is a cross between the *Green top Swede* and the common *White Globe*. It is oblong in shape, and keeps well till late in the winter, being very nutritious. It should have the preference as to time of sowing, requiring a rather longer season than the white varieties. It comes up quickly from the seed, and grows with great rapidity.

The seed, whatever may be the sort selected, should be procured from a reliable seedsman, and where it is possible, we should always prefer to get imported English seed; it is more true, is generally grown with greater care, and is less liable to be hybridized than American seeds. Few if any of our seed growers take pains enough to grow turnip seed with that care it deserves, and besides our climate is not as favorable to the growth of the plant as Great Britain. If the seed is sown broad cast, and the ground has been treated as we have stated above, there will be little need of after culture, with the exception of thinning out the plants in spots where they have grown too thickly. The chief point in growing turnips is to secure the seed a good friable bed, so that when the plant puts out its tender tap root, it will have plenty of the right kind of material to feed on, and thus be kept growing rapidly from the time the cotyledons or seed leaves appear above ground, until the frosts stop its growth. Whenever the turnips come up, and the leaves assume a yellowish tinge, we may be sure that the soil is too poor to grow a crop. With the above treatment, even in the driest seasons, it will be found that in thirty days after sowing, the turnips will give the field where they are sown a

green covering, which will prevent the growth of grass or weeds, and hence there will be little need for hoeing. The yield of such a crop ought to be at least six hundred bushels to the acre, or about twenty tons in weight. The cost would be nearly as follows: where the ground chosen would be two acres of wheat stubble:

Carting out 40 loads of manure, 2 days work of 1 team and 2 men.....	\$6 00
Plowing in manure first time two days.....	4 00
Cultivating both ways.....	2 00
Carting out 20 loads of manure, 1 day of team and 2 men.....	3 00
Plowing or cultivating it in, 1 and 1/2 days of team.....	3 00
Rolling and harrowing one day.....	2 00
Compost of plaster \$1 00; ashes 50; salt \$1 50.....	3 00
Sowing compost, one man half a day.....	2 00
Seed, 2 pounds.....	2 00
Sowing seed and rolling, half a day.....	1 00
Two days thinning out, if necessary, of two men.....	4 00
Harvesting and securing, 1 team and 2 men 3 days.....	9 00
	\$39 00

The above table includes the whole cost that would accrue in the growing and securing two acres of turnips, and the yield of which may be estimated at six hundred bushels to the acre. The cost per bushel would be 6 1/2 cents.

Of the value of the white turnip, for feeding purposes we need hardly speak to those who have tried it. But as there are many who think roots a nuisance and not fit to be put in competition with corn, we will give a few figures to show to those the economy of having both crops on a farm where stock is grown for sale, and with the notion that they should be profitable.

In feeding cattle or young stock with turnips, the design is to get as much marketable beef from the crop as it is possible within the shortest time. Where turnips are fed to cattle in quantities as great as they are willing to consume, it has been found by actual experiment that an animal weighing one thousand pounds live weight, will consume one hundred and fifty pounds of turnips and 7 pounds of oat straw per day, and that at the end of 100 days, the increase was 448 pounds. This was the result of Mr. McCulloch's experiments, at Logan in Scotland. The animals experimented upon were two year old Galloway steers. In some of the trials bean meal was fed, as we feed Indian corn meal, when the quantity of turnips was reduced to 100 pounds with 3 lbs of cut straw and 4 lbs. of bean meal. In feeding young cattle, two, three, four or five years old, for market, the general practice is to give them all the hay they will eat, say 20 pounds per day, and from a peck to half a bushel of corn meal according to the size of the animal and its condition. Now with turnips; at the rate of half a bushel or 60 pounds per day, straw or corn stalks to the amount of 10 pounds and 4 pounds of cut hay mixed with 2 quarts of corn meal there would be a saving, and a quicker and larger growth of beef within the same time. For the turnips will make the cattle thrive better on straw, than they do on hay alone, and the economy of the turnip consists in enabling the farmer to convert much of the

straw, stalks, and poorer kinds of hay into beef or mutton. Two acres of turnips producing at the rate of six hundred bushels per acre, fed at the rate of sixty pounds per day to each head, would keep twelve head of young cattle for 100 days, using at the same time 10 pounds of cut straw or cornstalks, 4 pounds of hay, and 2 quarts of meal. The total cost would be, reckoning the money value of the several articles, as follows:

Cost of two acres of turnips.....	\$39 50
6 tons of straw or stalks at \$5.....	30 00
500 pounds of hay at \$10 per ton.....	2 00
2400 quarts of meal at \$1 per bushel.....	75 00

Total cost of feeding 12 head of steers for 100 days.....\$147 00

Or about \$12.25 per head. Now if the steers are put up on the first of December, and kept with a moderate shelter, and fed thus regularly, till the second week in March, it will be found that they have gained in weight, that they are healthier, and that if the fodder of the other cattle on the farm threatens to become short, that they, by the aid of the two acres of turnips, are more ready for the butcher than animals wintered on an equivalent of hay alone. Compare this with the usual result of feeding on hay and corn. Let the crop of hay be equal to two tons, and the corn equal to fifty bushels to the acre and the stalks $1\frac{1}{2}$ tons. Each growing steer will consume 20 pounds of hay and 7 pounds of stalks, with 4 quarts of corn per day, to keep it in as good condition as that indicated above, and the cost will be as follows for 12 head:

12 tons of hay at \$10 per ton.....	120 00
150 bushels of corn at 60 cents.....	90 00
4 $\frac{1}{2}$ tons of stalks or straw at \$50 per ton.....	21 25
	\$41 25

Now take the value and the cost per acre of each, we will see in what the economy of turnips consists:

1200 bushels of turnips required.....	2 acres
6 tons of straw or stalks the refuse of.....	3 acres
500 pounds of hay is the crop of.....	0 $\frac{1}{4}$ "
2400 quarts of meal is the crop of the three acres which produced the straw.....	

Total number of acres to support 12 head of cattle 100 days.....5 $\frac{1}{4}$ acres

Or at the rate of 43-100ths of an acre per head.

Without turnips we have the following results:

12 tons of hay at the rate of 2 tons per acre.....	6 acres
150 bushels of corn.....	3 "
4 $\frac{1}{2}$ tons of straw or stalks would be the refuse of the corn ground and a little over.....	

Total number of acres required to keep 12 head of cattle in fattening condition without turnips for 100 days...9 acres

Or at the rate of 75-100ths of an acre for each steer.

To render the whole result complete let us take the cost of the labor expended upon the two separate divisions. The first is:

The two acres of turnips are already summed at.....	\$39 50
Three acres of corn will cost \$8 per acre.....	24 00
$\frac{1}{4}$ acre of hay, the beet (no other).....	1 50
	\$64 00

The second shows:

6 acres of hay at \$6 per acre.....	\$36 00
3 acres of corn at \$8 per acre.....	24 00
	\$60 00

Difference in favor of the 1 $\frac{1}{4}$ or on the hay lots.....\$4 00

Another consideration on the culture of white turnips must not be lost sight of; and it is the fact that a crop can be secured in all ordinary seasons, off the same ground that has already produced a crop of

wheat, without injury to the land. In fact, the turnip crop mellow and helps to make land clean and free from weeds, especially where well grown. In harvesting and securing the crop for winter use, there is no greater labor required than in securing potatoes, in fact not so much, for turnips are hardy, and generate a great deal of heat when piled together in large quantities.

The Nature of Hair Worms.

BY PROF. WINCHELL, OF THE UNIVERSITY OF MICHIGAN.

A writer in this Journal * having asked an explanation of the sudden appearance of a number of "hair worms" in a pan of milk; Mr. Gage† responded by attributing them to the agency of crickets. To this explanation Dr. Schetterly‡ took exceptions, and thought that the action of electricity upon common hairs was sufficient to account for the apparent vital phenomena of "hair worms" or "snakes." Mr. Gage's rejoinder § adduces some additional facts, and insists upon the origination of these beings within the bodies of crickets.

In view of the interest manifested in these inquiries, and the prevalence of the popular notion that all "hair snakes" are produced from veritable hairs, I have thought it might be well to throw together the facts which have been collected by naturalists respecting these extraordinary forms, and present references to some of the authorities from which information may be derived.

Respecting the real animal nature of these "worms" there is among naturalists no difference of opinion. The microscope, as will be seen, has revealed enough of their structure to enable us to determine their nature, and assign them a place in the Animal series. The "hair worm" belongs to that extensive class of white-blooded worms called *Entozoa*, or "Intestinal Worms":—animals whose dwelling-place is mostly within the dark recesses of other animals' bodies. Scarcely a species of animal exists which does not support one or more species of these parasites. A large number infest the human subject. They are not confined to the intestinal canal, but certain species burrow in the liver, the brain, the skin, the membranes of the eye, and the eyeball itself. The smaller animals, as well as the larger, are a prey to their peculiar *entozoa*.

The "hair worm" is one of those which exhibit the lowest organization, and in consequence very little is known of its history. Scientifically speaking, it belongs to the genus *Gordius*. Our commonest species is named by Dr. Leidy** *Gordius varius*. Another species he refers doubtfully to the European *Gordius aquaticus*. *Gordius* is the name of the ancient Phrygian King, the knot in whose harness Alexander untied by cutting it with his sword; and this worm is so called in reference to its disposition to involve itself in intricate knots.

* Michigan Farmer, Vol. XIV, p. 280. † Ib. Vol. XV, p. 329.

‡ Ib. Vol. XV, p. 75. § Ib. Vol. XV, p. 143.

** Proceed. Acad. Nat. Sci., V. 263, and VII. 56.

Perty || furnishes the following characteristics of *G. aquaticus*:—Body thread-like, round, tough and elastic; mouth at the anterior extremity, closed; intestine without exit; males with a forked, and females with a rounded posterior extremity; is fond of tying itself into knots; dwells in fresh water and moist earth; enters at times the inside of other animals in order to deposit there its eggs; after the development of the eggs, the offspring issue forth at a given stage, and live free. The female of *G. varius* is characterized by a *trifurcate* caudal extremity.

As to the animals infested by *Gordius*, it is related by Siebold,¶ that a friend of his in Bavaria once detected this worm entering the body of a "green locust." The locust struggled a long while against the intrusion of the worm, but finally perished. Dr. Harris also states that he has taken three or four *Gordii* from the body of a single locust [Report on insects injurious to vegetation, 1842, p. 155.] Besides the testimony of Mr. Gage and others, that the *Gordius* very commonly breeds in the bodies of cric-concurrent facts. An American species has been seen to issue from the body of a grasshopper.‡‡ Some little known species are said to be developed in the bodies of the larvae of many aquatic insects.†† The worms are found free in clear running waters early in the spring and summer; they enter the bodies of insects in the fall, where they deposit their eggs. These insects die, and their bodies afford to these eggs a convenient shelter during the winter, when in spring they will hatch and become free again.‡‡ kets, Mr. Sanford of Ohio** has recorded several

That the *Gordius* is actually developed from eggs produced by a parent *Gordius*, is established by observations of Dr. Leidy,‡‡ who, in 1846, discovered a knot of fourteen *Gordii*, to the posterior extremity of each of which was attached a white opaque cord, nearly as long and large, in some instances, as the animal's themselves. These cords consisted of millions of eggs closely compacted together. The eggs were microscopically examined, and watched daily through all their changes, until young *Gordii* issued from them, which resembled their parent as closely as is usual among Entozoa. Similar observations have been made by Grube.‡‡

The structure of *Gordius*, so far as ascertained, is as follows: The muscular system consists in other related Entozoa, of four longitudinal bands of muscles on the four sides of the body, the fibres of which so anastomose with each other as to exhibit under the microscope, a fine network when the animal is a little stretched.¶¶ As to the nervous system, Berthold and Blanchard have conjectured that two delicate double filaments, traversing the whole length of the body, possess nervous functions; but as these give off no lateral branches, and moreover have not been traced to any cephalic centers, this opinion can hardly be admitted.¶¶ The existence of a mouth and intestine has not been established by direct observation,*** though Leidy observed these in the developing embryo, the mouth being surrounded by a circle of protractile tentacles. No vascular system has been satisfactorily made out. Berthold has describ-

ed what he took for a circulatory system, but Blanchard††† has failed to confirm his statements, after very careful research. The genital organs of both sexes have been described with considerable minuteness.‡‡‡

Little more is known of this obscure worm. Careful reports of observations on its habits would be gladly received by the scientific world. Such facts as Mr. Gage has published add to our positive knowledge.

A. WINCHELL.

UNIVERSITY OF MICHIGAN, Ann Arbor, May 19, 1857.

Michigan City—Draining Swamp Lands on an extensive scale.

During the past month we paid a visit to Michigan City, and whilst there had an opportunity of examining the effects of ditching upon a scale as extensive as any we have seen in the country.

The soil of the land surrounding Michigan City is a light sand, of a buff color, not altogether barren, for it is easily covered with vegetation, wherever the least pains have been taken to cultivate it. Michigan City lies almost entirely protected from the winds which sweep over Lake Michigan by high bluffs of sand, on which even to the summit, there are trees and shrubs. How these bluffs became piled up, it is now impossible to say; of course there are many theories, on the subject; they extend along the shore of the lake from beyond New Buffalo, to some distance south of Michigan City. It is evident that the action of winds and of the moisture of the lake have combined in their formation, for these bluffs or high banks of sand do not extend far inland.

Michigan City is located on the flat land near the mouth of a small creek called by the old French settlers "La Riviere du Chemin," and the ground about half a mile out gradually rises into a rolling surface, leaving the impression on any one looking down from it, that the town was located in the middle of an immense amphitheatre, with the extraordinary bluffs on either side forming a gateway beyond which may be seen the blue ocean like expanse of Lake Michigan, stretching northward and westward to the horizon. The rising grounds immediately in the rear of the town have all been denuded of their timber, and now grow only brush. This has been done mostly by squatters who have located their shanties and gardens, and taken possession of land which is mostly owned by non-residents. After gaining the summit of this rising ground, which is about twenty-five or thirty feet above the level of the Lake, the country stretches away inland in a series of rolling plains, covered with timber, and sinking in many places into ponds or marshes, until the prairie country opens out at about ten or fifteen miles southward. Close inside the sandy bluffs that

|| Spex'le Zoologie, p. 522.

¶ lb., p. 523, note.

** Proceedings of Amer. Assoc. at Cleveland, 1853, p. 250.

†† Dictionnaire Universelle d'Histoire Naturelle, article *Gordius*.

‡‡ Proceed. Acad. Nat. Sci., Phil., Vol. V. p. 94, 263, 275, 279.

‡‡‡ Wierman's Archiv für Naturgeschichte, 1849, p. 358.

¶¶ Siebold, Anat. of the Invertebrat., translated by Burnett, p. 106, note.

¶¶ lb., p. 110, note.

*** lb., p. 113, note.

††† Annales des Sciences Naturelles, XII., p. 4, 189.

‡‡‡ Siebold, p. 128. Note. On *Gordiacea*, see especially Dujardin, Histoire Naturelle des Helminthes; Diesing, Systema Helminthum; Proceed. Acad. N. S., V., 263, and VIII. 56; Girard, lb. V. 279. The works referred to in this paper may be consulted in the University Library.

line the lake shore, and extending for some five or six miles from the limits of the city, are a series of low swamp lands, which reach up to Fish Lake, a large pond several miles in extent. This pond had no outlet, and consequently its surplus waters, found their way out only by partially overflowing and percolating thro' the marshes which extended between the lake and the low land on which the city is located. At some remote period the whole had been probably a lake, but now it is a marsh with the black vegetable muck varying from a foot and a half to six feet in depth, soft and spongy in texture, and till within a short time of such a consistence that a crow could hardly alight upon any part of it without sinking up to the hocks. All this vast extent of "dismal swamp" belongs, with many broad acres of other land to C. B. Blair, Esq., the well known banker and merchant of Michigan City. He had come into possession of it some years ago, and when he talked of improving it, he generally had a good deal of sarcastic advice tendered as to its capabilities for producing first rate crops of pond lilies and cat tails, and of growing improved shorthorn mosquitos, and Bake-well frogs. Three years ago, however, Mr. Blair cut a ditch from the creek to Fish Lake, of six feet in depth and about the same width at a cost of fifty cents per rod. It extended in length between four and five miles. This ditch passed through the long marsh a little on one side; when it was cut, Mr. Blair and some of his men passed up it in a canoe to Fish Lake. On the eastern side of the marsh another ditch of like extent and capacity was cut afterwards. This main ditch has now been cut for three years, and the results are that besides getting rid of the surplus water of Fish Lake, the marsh has become solid enough for cattle to tread over any part of it. The surface has settled considerably, for the old drain which was originally six feet deep and six feet wide at the top, is now shrunk so that it is hardly three feet deep and not over four feet in width. During the present season, a large portion of main ditch has been re-cut, so as to make it of a width of six feet at the top, three on the bottom, and four feet in depth. Into this main ditch there has been cut ditches of an equal size, which cross the main ditch at right angles, and commence at the foot of the uplands. These are arranged so as to divide the marsh eventually into lots of thirty or forty acres each. As each ditch was cut and the lots were surrounded by channels which conducted the water to an outlet, the marsh grasses died out, and, June grass, Blue Knot, Redtop and sometimes clover made their appearance. Some of the drained marsh land has been ploughed up with the intention of trying it with several crops, amongst these are corn, millet and oats. From what is already known, Mr. Blair has come to the conclusion that after a marsh has had ditches cut for the reception of water, it

should not be broken up for at least one or two seasons succeeding, for the reason that most of the wild grasses natural to wet soils will die out of themselves, and the new vegetation will aid in mellowing the soil more quickly after it is once turned over. In some of the lots where islands existed, the sharp gritty sand which prevails here has got thoroughly intermingled with the decomposed peat, and a rich friable soil is found similar to that of our best prairie land. With the peatmuck in plenty to haul upon the sandy uplands, and the sand ready to topdress and intermix with the pure vegetable black muck of the drained swamp, it must be admitted that the useless pestiferous swamp will eventually turn into a stock farm of the highest value, and rich in every element which contributes to fertility.

THE RESULTS OF DITCHING ON AN EXTENSIVE SCALE.

As yet the work undertaken by Mr. Blair shows but partial results, and it probably will be four or five years before what might be termed the full effects of his continued labors will be seen. That, if continued in the same spirit with which they have begun, important benefits will accrue to the whole of the section of country around Michigan City, is not to be doubted, and that fair pecuniary remuneration will also follow, within a reasonable period, is equally certain. The public benefits will consist in the opening up to settlers of a large tract of land, now not only worthless, but positively injurious, for the production of valuable crops, and the raising of cattle, sheep and other animals. The success of this experiment will induce others to improve, or put those lands in the vicinity which are unproductive into the hands of those who will expend labor and capital in rendering them productive likewise. Eventually a producing and consuming population will be accumulated in the neighborhood much sooner than would have been otherwise congregated, had no such improvement been attempted, and the forbidding and pestilential marshes of Fish Lake been left to scare away settlers. The pecuniary results are to be seen now: lands worth a few years ago not over one or two dollars per acre, are now worth ten times that amount, and are increasing in value. Cattle pasture where heretofore only the wild fowl, the water snake, the frog, and the musquito, could find a living, and of course all the other real estate, as well as the business of the locality have increased in value, and will continue to progress in the same direction.

Of the certainty of the results to flow from this expenditure, we had a very excellent example:—Some twelve years ago, Mr. Ward came into the possession of a large tract of land a few miles back of Michigan City, on the road leading southward. On this tract there was a marsh or small shallow lake of about 200 acres in extent in which were sev-

eral islands that promised to give good pasture for his stock, if they could be reached in safety. The water on this marsh stood on an average from three to four feet deep, with no outlet whatever, except that it soaked through the somewhat sandy soil, when it accumulated so as to rise above a certain elevation. Mr. Ward, like the rest of his neighbors, knew at that time, little about draining or ditching; but it struck his mind that if he could lower the water on the marsh, his stock would be able to reach the islands, and enjoy good feed, whilst he was busy clearing off the timbered land by which he was surrounded. With this design, therefore, he cut an open ditch for about a quarter of a mile, with its outlet in a marsh located on a somewhat lower level than his own. This ditch was from four to eight feet deep, the heaviest cutting being in the upland nearest the marsh. The moment the water found an outlet it rushed through the opening and cut out the channel in the loose soil to a depth of twelve to eighteen feet, so that now there is a small ravine of about twenty feet wide and fifteen in depth, where originally there was only a ditch of about ten feet by eight. The effect of this drainage was that not only were the coveted islands put within reach of the cattle, but a tract of bottom land was made so dry that in the course of two or three years it was put in cultivation, and is now bearing crops of corn and potatoes. The soil seems inexhaustible, consisting of three or four feet of black vegetable muck, with not a particle of other substance in it. The tillage which it has undergone, has rendered the surface a perfect friable earth or mould, loose, and very easily worked. The remains of last year's corn crop gave evidence of the great size to which the stalks must have grown.

The implement with which the breaking up was done, should be placed in the Agricultural Museum at Lansing. It was a plow, the beam of which was nearly 12 feet in length, and heavy in proportion. The mould board was of the largest size cast, and was prolonged by the attachment of four pieces of two inch flat iron, arranged so as to coincide with the curve of mould board, and thus more effectually turn over the very broad furrow which such a plow would cut. The depth of the furrow cut by this plow was twelve inches, the width twenty-four to thirty inches. When turned over the furrow would of course lie flat, and on this flat surface corn was planted, and grew to a height and luxuriance which are only known by those who have given marsh lands a fair trial. The plowing was done with nine yoke of cattle.

After the effect of the first ditch was seen and understood, and the water was taken off, other ditches connecting with the main outlet were cut to an average depth of four feet; and now where a few years ago a lake diversified the landscape, a level sur-

face of the richest meadow and arable land extends. Of course all this improvement needed the personal energy and superintendence of one whose foresight was sufficient to comprehend that the results would eventually reward him.

Mr. Ward during the past winter has thrown upon a portion of this marsh soil, a quantity of the light sharp sand which compose the hills surrounding it, and will probably try this piece with wheat, and then seed it down. The results of this experiment, we hope to lay before the readers of the Farmer at some future time.

Short Horn and Devon Stock—Their Growth.

While at Coldwater, on the 13th of June, an opportunity occurred of weighing, measuring and comparing some Short Horn and Devon stock, the results of which are worth the consideration of breeders of cattle, as exhibiting in some degree the practical profits to be gained by patronizing good choice animals when they are within reach of farmers. At the request of Mr. J. B. Crippen, Dr. Littlefield brought out a bull calf, six months old on the 15th of June named *Cato*, which was sired by Haymaker, and whose dam was a full blood cow brought from Ohio. Mr. John Allen brought out a young Devon bull, a year old last March, named *Allen's Duke*, sired by Imported Duke of Devon, and whose dam was from the same parentage once removed. Mr. Clark D. Williams brought out his three years old Devon bull, sired by the Duke of Devon. Mr. James B. Crippen brought out *Orpheus* the somewhat celebrated bull calf which he purchased a year ago, at the sale of Mr. L. G. Morris, and which is now seventeen months old. He also had out *Baron Balco*, a bull calf ten months old, a grandson of the celebrated imported Balco, and also the improved Essex Boar, named *Hanno*, which is also from the stock of L. G. Morris. These were all measured and weighed, and the following is a list of the results:

Dr. Littlefield's *Cato*, Shorthorn, weighed 665 pounds, and measured 4 feet 10 inches.
J. B. Crippen's *Baron Balco*, weighed 835 pounds, measured five feet five inches.
J. B. Crippen's *Orpheus*, weighed 1212 pounds, measured six feet three inches.
C. D. Williams' *Devon Bull*, weighed 1312 pounds measured 6 feet 2 inches.
John Allen's Yearling *Devon*, weighed 822 pounds, measured 5 feet 7 inches.

The Essex Boar *Hanno* weighed 400 pounds exactly, and measured round the body close to the shoulders four feet six inches, and from the end of the nose to the root of the tail, five feet five inches.

Not one of the animals were what would be called fat, or more than in serviceable condition. But we want farmers to look at their ages and weights. For instance assuming Dr. Littlefield's calf to have weighed 65 pounds when dropped, it has actually increased at the rate 100 pounds per month, or 3 $\frac{1}{3}$ pounds per day since that time, thus earning at the present prices of beef cattle, \$30 for its owner in six months. *Baron Balco*, in ten months, assuming his weight to

be 65 pounds, has earned \$40, and gained 80 pounds in weight each month. Orpheus who is seventeen months old has gained every month over 71 pounds. The Devons, it is well known, are of smaller size naturally than the Shorthorns; but their thrifty condition spoke well for their hardiness in passing through such a winter as that of 1856-7. None of Mr. Crippen's Shorthorns had been fed grain, but had been well stabled.

It is often argued, by those who do not know much about the results of improving stock or who have little enterprize or ambition, that common stock is just as good and just as profitable as the best Shorthorns. When any of them can show for their common bred calves and yearlings, such weights and measurements as the above, and such money results, we shall feel obliged to them for a note of it, so that it can be published for the benefit of stock breeders who must be considered as throwing away their money, when just as good animals can be had at home.

Farmers' Stores.

Last month J. Kinney Jr, of Plymouth, wrote us a letter stating several cases of imposition practiced upon him by merchants, and asking for information relative to the formation of joint stock farmer's stores, and whether we knew of any in successful operation. At the time we received his letter, Mr. L. D. Watkins of Manchester, was in the office, and he informed us that at present there is in very successful operation an association in Manchester of this kind, which has done well, dividing the present year a surplus of profits equal to 80 per cent. The success of this association has stimulated other places and we learn that an association of a like kind is about to be formed in Clinton, Lenawee Co. We publish the Preamble and Constitution of the Manchester association, which has been forwarded to us by Mr. Watkins, and hope that he will give us a detailed summary of the business and mode of operations, as well as the results, and also comparison of the benefits to the stock holders with the common mode of doing business.

PREAMBLE.

Whereas, The producing classes receive so small an equivalent for their excessive toil, that in many cases, no surplus remains after the purchase of their necessities of life; and *Whereas* those with small means are subjected to disadvantage in making their purchases alone, which a union of capital with that of their brother laborers would overcome; and *Whereas*, it is desirable to create a feeling of brotherhood among these classes, and to afford opportunities for mutual consultation as to their true interests: Therefore in order to establish a just and economical method for the production, distribution and consumption of the fruits of human industry, to release society from the burden of sustaining useless functionaries in the several departments of Mercantile, Civil and Social life; to establish such a system of Exchange as shall protect and ennoble, rather than despoil and degrade human labor; to associate producers into an organization for their mutual benefit and improvement, and to secure to each the strength of all; we hereby associate and organize ourselves as a body mercantile, which shall be designated and known as the Washtenaw County Self Protective Mercantile Association, to be located at Manchester, and we hereby agree adopt the following

CONSTITUTION:

ART. 1. The purpose of this Association, is the organization of the Agricultural Mechanical and Laboring interests, with the Mercantile: that all may be equally interested and benefitted.

ART. 2. The Officers of this Association shall consist of a President, Vice President and Secretary, with a Board of Directors, of five in number; to be elected by ballot by the Association, at their annual meeting.

ART. 3. It shall be the duty of the President to preside at all meetings of the Association; to preserve order; to state all questions of business that may arise, impartially, and have the casting vote on all questions when the Association is equally divided. He shall order special meetings of the Association when the interest of the same requires it; or upon receiving a written request so to do, from fifteen of its stock-holders.

ART. 4. The Vice President shall assist, or support the President in presiding; preside in his absence, and in the event of his resignation, death or removal from office, the Vice President shall act as president, until the next annual meeting of the Association.

ART. 5. The Financial Secretary shall make a just and true record of the proceedings of each meeting of the Association; also the names of subscribers to the articles of the Association, and the amount of shares subscribed by each, and all transfers and withdrawals of shares, and in case the President and Vice President are absent, he shall call the meeting to order when the president *pro tem* shall be elected. The Financial Secretary shall receive all communications addressed to the Association, attend to its general correspondence and impart such information from time to time, under the direction of the Association as may be deemed useful; he shall also file all business papers, or correspondence that shall be deemed of future use. The Financial Secretary shall receive and take charge of all moneys belonging to the Association, and pay out the same, as ordered by the Board of Directors, and all bills shall be approved by the President. He shall keep his accounts in a just and legible manner, and make a monthly report of the same to the Board of Directors, and shall give satisfactory bail for the faithful performance of his duty to the Association.

ART. 6. It shall be the duty of the Directors to manage the financial concerns of the Association, to purchase or cause to be purchased all good or merchandize, to provide proper salesmen, clerks and assistants, to provide necessary stoves and apparatus for the store, such as fuel, lights and all other things necessary for the transaction of business; to take an inventory of all goods and other property belonging to said Association, as often as once in six months, or oftener if a majority of the Association shall require the same, which inventory shall be taken at the proper charge of the Association. But the said Directors shall have no power to purchase goods or other property upon the credit of the Association, or in any other way to run the Association in debt upon any pretence whatever. And said Directors are hereby, further required and directed to sell all goods belonging to said Association, to the members of the same and to indigent widows at no greater than ten per cent above the cost of the same at the store, and to individuals that are not members of the Association, not above twenty per cent above said cost, and they are also prohibited from selling goods or any other property belonging to the Association, upon credit or in any other way but for ready pay.

ART. 7. Each member of, the Association who shall subscribe and pay for one share shall be entitled to one vote, and for every additional two shares, one additional vote. *Provided*, No member shall be entitled to more than five votes for any number of shares he or she may own.

ART. 8. The amount of stock subscribed shall be paid to the Treasurer, or to any person who may be authorized to receive the same whenever the Directors may so order.

ART. 9. No person shall hold an office in this Association who is not a stock-holder.

ART. 10. The books and papers of this Association shall be open to the inspection of its members.

ART. 11. The capital stock of the Association shall consist of shares of twenty-five dollars each.

ART. 12. No stockholder shall be permitted to withdraw the amount of his or her shares within one year from the time of purchasing, the same.

ART. 13. All officers, Agents and other persons in the employ of the Association shall deliver up all papers, accounts, books, documents, funds or other property belonging to the Association, to their successors in office.

ART. 14. The Association may amend at any regular meeting, such By-Laws for the governing thereof as two-thirds of the stock-holders present shall deem proper: provided such laws so amended shall not contravene with the

Constitution, or violate the principles of this Association.

ART. 15. The Annual Meeting of this Association shall be held at Manchester, on the first Monday of January, in each year, for the election of officers, and the transaction of such other business as pertains to the welfare of the Association.

ART. 16. The president shall give at least six days notice of all meetings of the Association, which notice shall be in writing, signed by the President, and one notice shall be posted up in a conspicuous place in the Association's store, and two others shall be put up in two of the most public places likely to give notice to the members of the Association.

ART. 17. At any regular or special Meeting, five members when assembled, shall constitute a quorum for the purpose of adjourning, and eleven members when so assembled shall constitute a quorum for the transaction of business.

ART. 18. The Board of Directors shall have power to fill all vacancies of office not provided for in the preceding By-Laws.

ART. 19. The President and Directors of the Association shall receive each one dollar and fifty cents per day for their services while transacting business for the Association.

ART. 20. A dividend shall be declared once in six months by the Association, and the amount when not withdrawn by the stock-holders shall be placed to their credit on the books of the same.

ART. 21. Any member may withdraw the amount of his or her shares in money after the time specified in Art. 12, by giving thirty days notice, in writing, to the Treasurer, that he or she intends so to do; provided said shares do not exceed one hundred dollars, and ninety days for all amounts over one hundred and not to exceed five hundred dollars; and for all sums over five hundred dollars, one year's notice shall be given.

Valuable Stock for Illinois.

A correspondent has mailed us from Liverpool England a copy of the Evening Post, of May 21, in which we find the following notice of the shipment of some most valuable stock for the Cattle Breeding Association of Illinois, and of which we hope a few of our Michigan Farmers may avail themselves at some future time. We notice the selections made are such as will undoubtedly prove of great service to Western stock. The whole expenses incurred by the association will not be far from \$50,000. Western men may well feel gratified at this exhibition of the active spirit which pervades the agriculturists of this section of the Union:

We were much gratified with the privilege of viewing an extensive and valuable consignment of breeding stock which sailed yesterday for Philadelphia, in the ship Georgia, Captain Macloon. The animals, 85 in number, consisted of 32 head of shorthorned cattle, 11 of which were bulls of varying ages and rare beauty of symmetry; 3 very valuable horses; 25 sheep, and 25 pigs. These animals have been selected with the utmost care, and without regard to expense, by Captain Brown, Dr. Johns, and Mr. Jacoby, members of the Illinois Cattle Importing Association, for that body, and are intended to be distributed in the state of Illinois exclusively, with a view to improve the breeds in that state by crosses with the best blood to be obtained in this country. The gentlemen named have spent several months in Britain, devoting their time entirely to the selection of these animals, and in doing this they have not spared time, labor, nor cost. They visited the herds and studs of the most celebrated breeders and holders in England, Ireland, and Scotland, picking out from them such animals only as were likely to suit the

object which they had exclusively in view; and these, when met with, were at once secured, the matter of price being held altogether as a secondary consideration. Some idea of the truth of this may be formed from the fact that so much as 250 guineas was paid for one two-year old heifer, and that the cost of the 85 animals, including their freight and forage to Philadelphia, will not be less than £8,000. To go a little more into particulars, we may mention that they have purchased "Young Barnton," a thoroughbred stallion of an extensive and unimpeachable pedigree. His sire, "Barn'ton," has been secured for serving the royal stud at Windsor, at the large sum of £250, for the present season, and £400 for next season. They have also purchased "Catchfly," a thoroughbred filly; and "Baylock," a Cleveland bay stallion. These horses are all of very pure blood, and present the unmistakable points of admirable breeding. They are such animals as are but rarely to be met with, and cost almost fabulous prices. "Young Barnton" was purchased from the celebrated stud of Mr. Ridley, Leyburn, near York, whose name is in itself a guarantee of excellence; the mare from Mr. Burton, of York, and the Cleveland Bay from Mr. Shaw, of the same city. The bulls, cows, and heifers have also been selected with equal care and attention from the Royal Agricultural Society of Ireland's show, held in Dublin about a month or six weeks ago. The gentlemen of the deputation here bought up the first prizetakers in nearly every class exhibited, securing several bulls and heifers of extraordinarily fine symmetry and well-known pedigrees. They also, at this show, secured at large prices, several beautiful pigs. The other animals of these descriptions were purchased from the most celebrated herd and flockmasters in England, including Southdown sheep from the famous flocks of Mr. Jonas Webb; Cotswolds from those of Mr. Lane, Mr. Williams, and Mr. Hawes; and cattle and pigs from the stocks of the Rev. Mr. Cator, Selkbrook; and of Messrs. Combes, Cobden, and Cruickshank, Aberdeen; R. C. Lowndes, Clubmoor, and H. Ambler, Halifax. To collect this choice as well as extensive assortment of first-class animals, the gentlemen first named visited and inspected nearly every one of the most celebrated collections in the United Kingdom, and exercised the utmost patience and judgment in their selection. The collection has been visited and admired by cattle breeders and feeders of the first rank in England, during their brief stay in Liverpool. The preparations for their shipment and safe keeping on the voyage were entirely entrusted to Mr. Bell, of the Adelphi stables, and that gentleman has exercised his usual skill and judgment in having them put up in such a manner as to ensure their safety and comfort during the long voyage which they have just commenced. The appropriate fittings and provisions on board the ship were the theme of general admiration to the very great numbers who visited the ship on Monday, Tuesday, and yesterday. The whole of the 'tween decks was secured for the cattle at a freight rate of £800, and it was completely fitted up with pens and stalls, all padded round, and the utmost care was taken to secure thorough ventilation in every part of it. In addition to the animals enumerated, there are also three beautiful little Shetland ponies, sent out by Mr. Bell to Mr. R. A. Alexander, Kentucky. Captain Brown, Dr. Johns, and Mr. Jacoby sailed yesterday for New York, in the City of Washington, and will await the arrival of the Georgia at Philadelphia. They have gained golden opinions in this country for their skill and liberality, as well as for

their gentlemanlike bearing. They also express a strong sense of gratitude for the kind and able assistance they received from the gentlemen with whom they had to deal, and also from Mr. H. Strafford, editor of "Coates' Herd Book," who, in addition to the advice he gave them, came from London expressly to inspect the preparations which had been made for the shipment of this, the most valuable exportation of breeding stock ever sent from Liverpool.

National trial of Harvest Machines and Implements Syracuse, N. Y.

The United States Agricultural Society having taken into consideration that it would be impossible to have a trial of harvesting machines and implements at their meeting to be held at Louisville in October next, have called a meeting for the purpose of trying reapers, mowers, rakes, cradles, scythes &c., at Syracuse. The actual time when the trial is to be held is settled, so far that it is known it will now be held on the 13th of July. The circular which is issued in pamphlet form states that each exhibitor is expected to give a written statement of the particular merits of his machine, explaining in what particular it is claimed to be superior to others of a like nature.

Notice of intention to exhibit machines, should, be given to the Secretary of Committee on Implements, H. S. Olcott, Westchester Farm School, Mount Vernon, N. Y., or to the Superintendent, Joseph E. Holmes, Newark, Ohio, on or before June 15th. If exhibitors delay until the week before the exhibition their application, it may be a matter impossibility to make arrangements to test, in a thorough and satisfactory manner, the tardy machines.

A pamphlet, containing a history of the proceedings, reports of judges, with a view of the grounds at Louisville, will be published after the Fall Trial, and copies forwarded to exhibitors, on application. Extra copies furnished at the cost of publication. Owners of premium machines may have them inserted in the Report, by furnishing a well executed engraving of the same.

The fees for entrance will be as follows:

TRIAL OF HARVEST IMPLEMENTS IN JULY.

For each of the Grand Gold Medals,	\$50
" " Large Silver Medals,	25
" " Bronze Medals,	5

Premium List.

REAPERS.

First,.....Grand Gold Medal and Diploma.
Second,....Large Silver Medal.
Third,....Large Bronze Medal.

MOWER.

First,.....Grand Gold Medal and Diploma.
Second,....Large Silver Medal.
Third,....Large Bronze Medal.

REAPER AND MOWER COMBINED.

First,.....Grand Gold Medal and Diploma.
Second,....Large Silver Medal.
Third,....Large Bronze Medal.

AUTOMATON RAKE.

Transferable from one Machine to another.
First,.....Large Silver Medal.
Second,....Large Bronze Medal.

CLOVER AND GRASS SEED HARVESTER.

First,.....Silver Medal and Diploma.

HAY RAKE.

First,.....Silver Medal and Diploma.
Second,....Bronze Medal.

TEDDING MACHINE.

First,.....Silver Medal and Diploma.
Second,....Bronze Medal and Diploma.

HAY OR COTTON PRESS.

First,.....Silver Medal and Diploma.

HAY PITCHING MACHINE.

First,.....Silver Medal.
Second,....Bronze Medal.

SMALL TOOLS.

Three Grain Cradles.....	Bronze Medal.
Six Hand Rake.....	" "
Six Hay Forks.....	" "
Six Grass Scythes.....	" "
Six Cradle Scythes.....	" "
Scythe Snaith.....	" "

A number of Discretionary Premiums will be placed at the disposal of the Judges, to be awarded to meritorious articles, not included in this schedule.

Chairman.—TENCH TILGHMAN, Oxford, Md.

Committee of Arrangements for Trials of Implements and Machinery.—John D. Lang, Vassalboro', Maine; Henry Wager, Rome, N. Y.; Joseph A. Moore, Louisville, Ky.; G. E. Waring, Jr., Am. Institute, N. Y.; A. G. Munn, Louisville, Kentucky; H. S. Olcott, Secretary, Westchester Farm School, Mount Vernon, N. Y.

We have no hesitation in saying that this trial will be the most interesting which has ever taken place in United States. We cannot say that it will decide finally which is the best implement, but it will afford inventors a fine opportunity for observation and comparison, and we have no doubt that its results will be found in the construction of better implements than any that have yet been presented to the public.

The jury selected to decide on the merits of the several machines is composed of the following named gentlemen, who were appointed on the 20th of May:

J. Stanton Gould, Esq., of Hudson, N. Y., was unanimously elected chairman of the jury.

Messrs. Seth Scammon, of Maine; Brooks Shattuck, New Hampshire; Edwin Hammond, Vermont; Sanford Howard, Massachusetts; Stephen H. Smith, Rhode Island; T. S. Gold, Connecticut; B. B. Kirtland, New York; Geo. Hartshorne, New Jersey; Jono. Jones, Delaware; Francis P. Blair and Samuel Sands, Maryland; Frederick Watts and J. L. Darlington, Pa.; Gen. J. T. Worthington and Wm. A. Gill, Ohio; Joseph A. Moore and W. L. Underwood, Kentucky; Joseph A. Wright, Indiana; Horace Capron, Illinois; J. C. Holmes, Michigan; Wm. C. Rives, Virginia; H. K. Burgwyn, North Carolina; A. G. Sumner, South Carolina; Richard Peters, Georgia; Lewis Worcester, Wisconsin; and Wm. Duane, of Iowa, were, upon motion of Gov. King, appointed as a Board of Judges for the trial at Syracuse.

Mr. Joseph E. Holmes, of Ohio, the general superintendent, was afterwards added to this Jury as one of its members.

On the Structure and Functions of Insects.

BY HENRY GOADBY, M.D., F.R.L.S.

Written for the Michigan Farmer, and copyrighted by the Author.

MANTIS RELIGIOSA.

Other insects were included in his Hemipterous Order, by the illustrious Swede, which have not only been removed therefrom (very properly) by his successors, but they now form distinct orders. Thus the modern *Orthopterous* (*orthos*—straight, *pteron*—a wing) insects, which comprehend those with *leathery* wing covers, such as *Crickets*, *Locusts*, and the like, were all grouped with the Linnean bugs. The characters of these creatures are so well marked, that it is perfectly justifiable to establish a distinct order for their reception.

All the *Orthopterous* insects are *mandibulate*—possess jaws for cutting—and many of them are emi-



Fig. 35. The Mantis religiosa, natural size.

nently destructive, doing great damage to the farmers' produce: it is not our object, however, at this time to enter upon this, *most important* part of the subject, but to confine ourself to the exemplification of *function*, associated with *structure*.

The *Mantis religiosa*, belongs to this order of insects; it is found abundantly in the East, and West Indies, and very extensively in the south of France and in the southern States of this country; the side walks of Baltimore, are said to be literally covered with them during the summer months—it is there called *rear-horse*—from the circumstance of the creature lying, when in a state of repose, with its head and fore part of its body elevated, and the hinder part lying on the ground. Our accomplished artist, Mr. H. E. Downer, has succeeded in giving a very beautiful, and characteristic figure of the Mantis, represented in this peculiar position, (fig. 35.) The name recorded above, which is its scientific designation, arose in this way: the Bramins had observed its peculiar attitude, and decided that the creature was engaged in prayer, thus it became the *praying* Mantis. Subsequently it became an object of religious adoration, which is continued to this day, and hence the specific name of *Religiosa*. So great is the veneration paid by the Bramins, and their followers to this insect, that they will not scruple to kill a man who is seen either to capture or destroy one of them; we shall see, how-

ever, that these simple minded priests have made a great mistake, as there is not in existence a more cruel, carnivorous creature, than *Mantis Religiosa*.

Another remarkable superstition pervades, not only the inhabitants of India, but is equally common with the people of other countries in which the Mantis is found. They appear to have a tradition that if any one lose his, or her way, it is only necessary to find a Mantis, place it in the palm of the hand, and the *direction to which the insect's head points*, after it has finally settled himself, surely *indicates the lost road*. Hence it has been called also, the *Soothsayer*.

We have heard of a party losing their way in South America, and fortunately meeting with a negro, asked him to direct them; this he could not do, but he hunted about for some time, and at last found a Mantis, which he placed in his hand, and presently, pointing in the direction of the creature's head, confidently told them that was their way—it turned out a mistake, however.

The Chinese are far better acquainted with its true history, and natural propensities; they not only breed them, but keep them shut up in cages till they think them strong enough to fight, and then make a match with a neighbor's insect, put them on a table to fight—the combat speedily terminates in the death of one of them. Travellers inform us that Mantis fighting is a great, and favorite amusement with this people, and that enormous sums of money frequently change hands on the issue of a Mantis contest; nay, that not unfrequently a man is known to stake his *all*, on such a venture.

Notwithstanding the distinctions which properly separate these insects from the Cockroaches, there are many points of close resemblance between them, so much so, that the demonstration of the mouth of one of them, might suffice for the other.

The anterior portion of the head is shown in fig. 36;

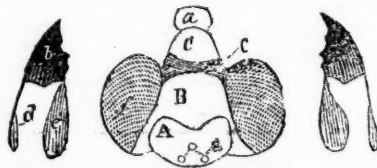


Fig. 36. Anterior bones of head, with the eyes of the Mantis

at a glance it will be seen that the visual organs are enormously produced, whilst the *knowing faculties*, as a phrenologist would call them, are in great abeyance as compared with the space for brain in the Cockroach. The upper lip is remarkably well formed; the upper jaws are short, strong, and powerful; the adductor muscle being of great size; the primary divisions of the skull are well marked, and the entire development of this part of the creature, fully indicates its habits, to those persons who have paid attention to the subject.

- A, the skull.
 B, the frons, analogue of the frontal bone.
 C, the clypeus.
 a, labrum or upper lip.
 b, mandible, or upper jaw.
 c, space occupied by the mandible.
 d, extensor, or abductor muscle.
 e, flexor, or adductor muscle.
 f, compound eye.
 g, ocelli, or single eyes.

The occipital bone, closely resembles that of the Cockroach, and is shown at fig. 37:



Fig. 37.

i, is the occipital hole.

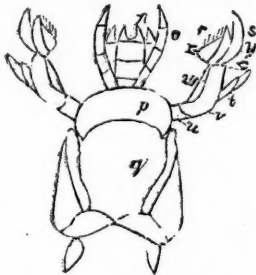


Fig. 38.

k, the portion that articulates with upper jaw, the beneath c.

l, the process that inclines upwards, and gives the rounded form to the skull.

m, the internal foramen, for the distribution of nerves to the mouth.

As compared with the Cockroach, the *under jaw* is minimized, all the parts, however, being very distinct. (Fig. 38.)

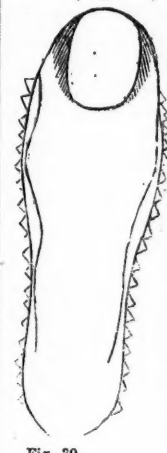


Fig. 39.

- n, the four lobed under lip.
 o, the labial palpus.
 p, mentum, or chin.
 q, gula, or throat.
 r, maxilla, or under jaw.
 s, galea, or internal maxillary palpus.
 t, maxillary palpus.
 u, cardo or hinge.
 v, stipes, or stalk.
 w, squama, or scale.
 x, mando, or maxillary lobe.
 y, apical lobe of galea.
 z, basal lobe of galea.

The first portion of the chest (prothorax) of Mantis is enormously produced, as compared with the other two segments, the *pronotum*, is a bone of great size, as will appear by consulting fig. 39.

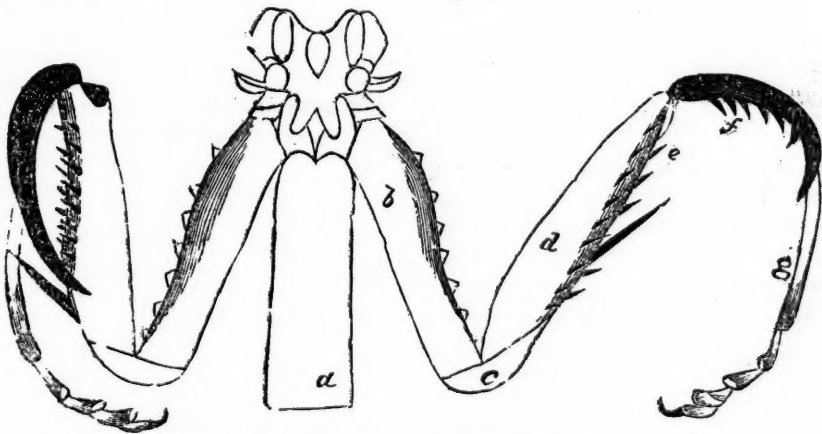


Fig. 40. The pronotum and forelegs of the Mantis.

In addition to its size, it is a much more dense, stronger, and heavier bone than any other bone of the skeleton; its sides, too, will seem to be covered with a series of short, strong spines—the whole structure is made for passive defense, and resembles a coat of armor.

The prosternum, agrees in size with the pronotum, and is a long, and broad bone, a, fig. 40.

The chief characteristic, and distinguishing feature of the Mantis, is the very extraordinary structure of the anterior extremities, or the first pair of legs.

It will be seen at a glance, that the organs are of prodigious size, and strength, apparently consisting of four distinct joints; the little bone (as compared with its fellows, but really of very unusual size) marked c,

dispels this illusion, because we have seen such before, and know it to be the *trochanter*, and secondly we knew that this bone is always placed *intermediate* between the hip, and the femur, therefore the colossal bone marked b, is the singularly modified hip, actually produced, for special reasons, into the form of a distinct bone, simulating a femur. A foreshadowing of such an arrangement we saw in the *Blatta*, but the development of the hips in that insect sink into insignificance when compared with this.

The *femur* really, is marked d, and presents characters of a very novel, and unique description.

Between the double row of strong, sharp pointed spines marked e, is a long and deep sulcus, or cavity—resembling the space in the haft of a knife; into,

this, the *tibia*, or shank, *f*, is received when the limb is flexed.

This latter bone is also provided with a series of short, strong, pointed spines, the terminal spine being of much greater size than the rest; the smaller spines, are arranged like those on the femur, in two rows, separated by an interval of space. It has been remarked that in a quiescent state, the Mantis assumes a peculiar position; under such circumstances these anterior limbs are fixed, and drawn together of a heap, and lie close and compact. The creature is not asleep, however, but is keeping a sharp look out for expected prey, and should some hapless insect make its appearance on either side, within the reach of its arms, they are suddenly extended, the shank occupying the position represented on the right side of the figure, and, (provided the insect be *within* the space of the femur and the thigh) it is suddenly flexed, with

the full power of the enormous muscles belonging to the two first joints of the limb, when the shank is drawn into the cleft in the femur, like shutting the open blade of a knife within the haft, and this act suddenly, dextrously, and unexpectedly performed, ends in the decapitation of the insect; so decided is the stroke, that the amputated head, flies off *instantly*, and rolls for a space! Sometimes the head is missed, in which case the victim is cut in half, and thus becomes an easy prey. A more accomplished *headsman* than the Mantis, never existed, and this forms the attractive feature with the Chinese; they know by long experience, that when two of these creatures are brought in juxtaposition, that one of them *must fall*, and it sometimes occurs that an individual survives two, three, or more combats, and is then regarded as a veteran, and bets run high accordingly.

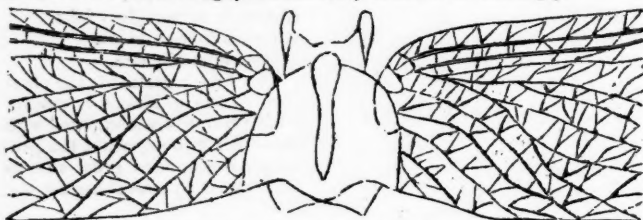


Fig. 41. The Mesonotum and first pair of wings.

The excitement reaches its maximum when the fight is maintained by two accomplished victors, the reputation of each being great, the combat long continued, and conducted with equal caution on both sides.

To the shank succeeds the foot, consisting of five joints, and terminated with the usual hooked claws.

The *mesonotum* is composed of well formed bones, about which there is nothing remarkable; it is repre-

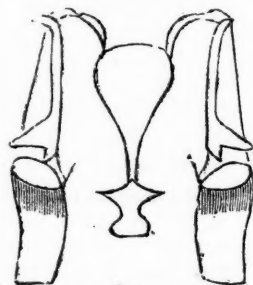
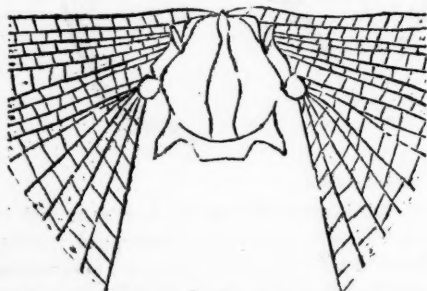


Fig. 42. Mesosternum.

The *metanotum* is shown in fig. 43. Here, too, the bones are distinct, and well defined; associated with



sented at fig. 41, to it are attached the first pair of superior organs, which are partly used for the purposes of flight, and partly for protection of the true wings.

The *mesosternum* is shown at fig. 42; it agrees in general particulars with the like structure in *Blatta*; the hips are of the same form, and the breast bone simulating a vertebra, but not so successfully as in that insect.

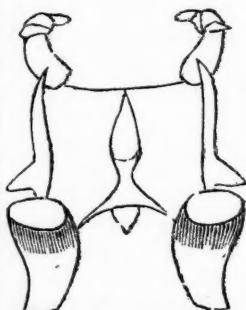


Fig. 44. Bones of Metasternum.



Fig. 45.

this back bone, we see the true organs of flight articulated. The great number of the *nervures*, and the extreme delicacy of the wings, render them objects of considerable beauty, whilst from their great size, and other circumstances, there is every reason to believe that these insects are capable of long rapid, and continued flight. The *metasternum* only differs from the *mesosternum* in the slightly increased size of the hips, and in the better condition of development of the (as if) vertebral bones. The upper portion of

the last two examples of hips represents the large cavity through which the muscles were extracted.

To shew the great disparity in size between the the first pair of lower limbs, and the last, we give a figure of the, latter (fig. 45.) *a*, is the hip, *b*, trochanter, *c*, the femur, *d*, the shank, and *e*, the foot.

The dorso-abdominal plates are shown at fig. 46, but do not present any feature worthy of remark ; it will be seen that they number six.



Fig. 46.

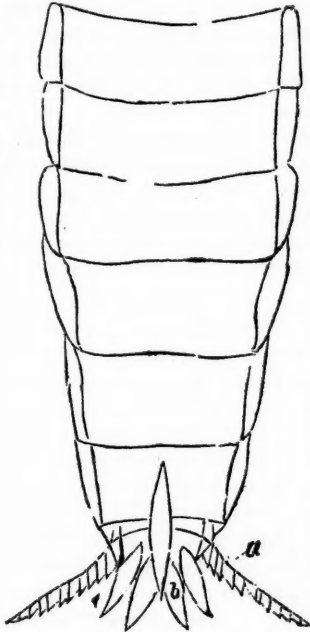


Fig. 47.

The ventro-abdominal plates are represented at fig. 47 ; they number one plate more than the dorsal surface. At the terminal plate are seen certain organs articulated ; the *jointed* body, *a*, represents the cerci, such as appear in *Blatta* ; the other organs, marked, *b*, belong to the function of reproduction.

Coldwater.

ITS FARMS—HORSES—SHORTHORNS—DEVONS—SHEEP
AND SWINE.

The village of Coldwater is pleasantly located on what was once a small prairie. This prairie is now cut up into farms, and their appearance indicates that the soil was not originally deficient in the property of producing valuable crops, and that as yet it has lost but little of its early vigor. It is somewhat rolling, and is surrounded by wooded hills, some of which have been cleared, and make very beautiful farms, with noble sites for building, of which some of the wealthy men of the village seem to be aware by the attention they are giving to improvements. The farms of J. B. Crippen, Henry Gilbert, J. A. Fiske, Henry Lewis, F. V. Smith, Mr. Warner, O. B. Clarke, John Allen, and others, which lie near to the village,

are evidences that not only is the soil good in quality, but that the attention of men possessing capital has been given to its cultivation. It is not generally known by those at a distance how much attention has been given to the introduction of good stock into this neighborhood, for the reason that little has been said about it and the men who have interested themselves on the subject have kept quiet. But probably in no locality of the State, can be seen more strongly the results of the introduction of improved stock. In traveling along the roads in the vicinity of Coldwater, as in the vicinity of all other villages, numbers of cows are to be found pasturing on the wayside, and in the fields near by ; amongst these cattle are to be found many grades of Devon ; they were easily known by their thrifty healthy look, their sleek hides, their color, their carriage, their size, and square handsome, deep body, and by their fine limbs and well turned, clear horns. These cows, showed that they had withstood the severity of the past winter and the scarcity of fodder much better than the natives, whose rough exterior, prominent bones, coarse heads and limbs, gaunt bodies and sluggish movements, it would take at least half the summer to get into a condition comparable with that of the grades ; most of these latter were bred from the Devon stock brought into Branch county by F. V. Smith, Esq. This gentleman was the first to introduce the Devon stock into Southern Michigan, and, we believe, amongst the first to bring it into the State. No evidence of the benefits conferred upon a community by the enterprise of a single individual, could be higher than that which is now shown by the stock around Coldwater. The high character of the Devon cattle, in this locality is still maintained, although Mr. Smith is not now interested in them, while the Shorthorns are receiving a like attention from others, and the horses and swine are beginning to show equally as well as the Devons.

THE SHORTHORNS AND DEVONS.

J. B. Crippen, Esq., within the past two or three years, has paid much attention to agricultural affairs, and has laid the foundation of a herd of improved Shorthorns, which are intended to supply breeders with first class animals. He has now a herd of eighteen head, old and young of which eight are cows, seven of which came from the imported stock of the Shakers of Union Village, Warren county, Ohio, and the other is Shaker Lady, a cow that took the first prize at the last state fair. She is now raising two calves, and is doing it well, and yet as a milk-er she is not by any means superior to either of the other cows of which this herd consists. They were all as a lot even in quality, first rate handlers, straight and square, of large size, short on the leg, fine boned, and small heads. Each possesses an unquestioned pedigree, and are entered in the American Herd Book. Mr. Crippen at present has three

bulls in his herd. Orpheus, the calf purchased at the sale of L. G. Morris of Fordham, is, of course at the head of the list. He has grown rapidly, and promises to be a bull of remarkably good qualities. He is roan in color, with a good deal of red on his neck and fore quarter. In handling quality he is very superior, is square in body, with great depth of flank. The hind quarters are large, of great breadth from point of hip to buttock, and carry the flesh full to the hock. In fact he is very full on the gambrel, with legs neither fine nor coarse, but in good proportion to the quantity of body they are designed to carry. His back is straight, and carried out full to the point of the rump. The hide of Orpheus is rich to the touch as the breast of an eider duck, with a coat of hair as soft as the hair on a lady's muff. In temper he appears as yet mild, and is easily handled. Of his pedigree we need say nothing; he is known as the son of the Duke of Gloster, a bull that when sold was universally admitted to be the best in all England, and to combine in the highest degree the best blood of the improved race; his dam was Songstress, also imported, and a cow, which for fifteen generations, from Snowball to the Studley bull of the English Herd Book, has not a single direct ancestor that is not an animal universally recognized as a dam or sire of the very first in quality of their time.

A second bull named Baron Balco, ten months old, is a remarkably good animal. He is red and white, and possesses some points which render him a greater favorite with many breeders than even Orpheus. He is a son of Captain Balco, imported by the Shakers in 1855, and a grandson of imported Balco, a bull brought from England by L. G. Morris, and were a bull to be sought in this state for producing valuable milk stock, he would be found hard to beat. He was bred by Mr. Crippen, his dam, Fawn, being one of the cows purchased from the Shakers, and in calf at the time of the sale. He is thrifty and promises to be a choice animal. The third bull is Prince, sired by Haymaker, and out of Shaker Lady. He is a valuable animal, his dam being well bred, large and one of the deepest milkers in the state. The stock of Haymaker is proving to be thrifty and fast growing, and his heifers so far have proved early and good milkers. Besides some of his calves which were on Mr. Crippen's farm, Mr. J. O. Pelton, had a heifer which had had a yearling, sired by Socrates, a bull owned by A. Y. Moore of Schoolcraft, when not quite two years old, and now although not quite three had a second calf. Mr. Pelton stated that her milk qualities were remarkable. Dr. Littlefield's bull calf, whose growth is given in another page, also was a fair specimen of the stock left in this vicinity by Haymaker. The other stock consists of heifer calves sired principally by Haymaker. Among the cows on Mr. Crippen's farm, was Mr. Frink's of Battle Creek, to whose calf was awarded last year a premi-

um over Orpheus at the State Fair. Mr. Clark D. Williams has a small herd of choice full blood Devons, which came principally from the stock of imported Duke of Devon and Duchess. His were larger than we usually see them, and his bull, a son of the Duke of Devon, is a well proportioned handsome animal, large of his age, which was three years. Mr. Williams has visited the sale of Mr. Wainwright at Rhinebeck, for the purpose of making some additions to his stock, if he should find those offered for sale, possessing qualities adapted for that purpose. Mr. John Allen had also a very perfect bull a year old last March, which possesses many excellent points. In size, handling and weight he is as good a specimen of a full blood Devon as there is. He was sired by Duke of Devon, and his dam was sired by the same bull. The close breeding in this case had evidently done no harm. Mr. Allen had some good cows of the same breed. It is to be hoped that he may bring his bull and other stock to the State Fair.

HORSES AND COLTS.

Coldwater is somewhat well known as a locality where the Black Hawk horses have become great favorites. There is one point sure, about this, and that is, they have kept clear of undersized animals. The Black Hawks here are of good size. Green Mountain Black Hawk, a horse brought into the state by Messrs. F. V. Smith and J. B. Crippen, in 1854, and now owned by Mr. Smith, has done great credit to the selection then made. There are quite a number of his colts of two years old to be seen near Coldwater, and they all display, in a greater or less degree, that style, trotting action, and bloodlike appearance and carriage which distinguished Old Black Hawk. Amongst them it may not be out of place to name O. B. Clark's, Mr. McCrae's and Mr. Smith's. There were a number of others in the neighborhood, but time did not permit a visit to them. Out of fifty mares sent to this horse last year, there are over forty-five which have either had foals or are about to have them. The colts of this horse are generally of the same rich chestnut color that he is himself, and carry their heads well up. So far many of them promise to be larger than their sire. This horse is about to visit Grand Rapids during the month of July, and he will undoubtedly be found well worthy of a trial by those who have choice mares of good size, and free action. It is probable that there will be a pretty good show of his two year old colts and yearlings at the state fair.

Mr. A. C. Fiske has two fine horses, one of them, Hero, is well known, having been awarded the first premium, in the class of horses for all work, in 1854. He has done good service in this neighborhood, and several of his colts which were on the farm of O. B. Clarke gave promise of becoming valuable horses. Black Prince, is a very fine Black Hawk stallion, recently brought from the Lake Champlain country by

Mr. Fiske. He has a great resemblance in color and form to old Black Hawk and is said to be very fast. Mr. Fiske would now sell Hero, and he would pay well in any locality that wanted a horse of Black Hawk blood well tried, as a stock getter.

Mr. E. M. Crippen, has two horses of very superior quality, and which are well patronized. One of them, the Sherman Black Hawk, is a fine four year old, with fast action, but kept at present in rather high condition. His pedigree has been already published in the *Farmer*. He has not yet been long enough in the State to be able to show his colts. The other horse is a very beautiful bloodlike three year old, sired by Old Trustee out of a trotting mare known on Long Island as Jenny Lind. His appearance is very prepossessing, being light, elegant, and graceful as a fawn. His color is a light bay, with dark mane, tail, and legs. He is yet young and untried, as to speed and endurance, he certainly comes of a good enough strain on the side of the sire to be reliable.

Mr. J. Allen, who owns the Devons spoken of above, has a filly, sired by imported Monarch. She is of a dark brown color and is said to be very like her sire in general appearance. She was brought here by E. M. Crippen, who sold her to Mr. Allen.

Mr. P. P. Wright has a very full bred Black Hawk mare, which he brought from Vermont, and will probably be shown at the State fair this season. She is of good size and of fine action. Her pedigree shows that she was sired by Old Black Hawk, and that on the side of the dam, she is crossed, half Morgan and thoroughbred. She is very fast. Mr. Wright also has a chesnut mare, a half sister to the noted Fashion. Mr. E. Allen has a Frustee filly two years old. Both of these were brought into the State by E. M. Crippen. The filly promises well at present.

It will thus be seen that in Coldwater and its vicinity there are gathered a number of horses of several strains of blood, noted for great excellence on the turf and on the road.

SHEEP AND SWINE.

Mr. Henry Gilbert on one of his farms, some distance from the village has a noble lot of well bred Leicester sheep, which he intends to keep pure, and to make the nucleus of a flock for breeding purposes. Those which he now has are good specimens of this breed. Mr. J. B. Crippen is increasing his flock of Southdowns, which he purchased at the sale of L. G. Morris. As these sheep are of pure blood, and come from stock of the best quality, as direct in descent from the choicest animals of the flocks of Jonas Webb of Babraham as any in the country, they afford to those breeding pure Southdowns, or who desire to cross for mutton, a fair opportunity to procure animals of undoubted descent with little trouble, either by purchase, or by hiring rams as has become the

practice with fine blooded stock both in this country and England.

The Improved Essex swine are well represented by a boar and sow, named Hanno and Dido, which which Mr. Crippen had from the stock of L. G. Morris. The boar is one of the best animals of his kind that has been brought into this State. He had been kept as low in flesh as possible, being light fed during the whole winter. Hanno is well proportioned, with a long body, heavy hams, a rather long nose, but not too long for a full grown male animal, which must necessarily show more strong points, if he has proper strength and vigor, than females. The sow Dido is a very handsome specimen of the breed, being very fine boned, very deep in the flank, and of great length of body and of very short legs. The great difficulty in managing her being the almost impossibility of keeping poor enough to breed from. In fact after these animals get to be three years old, it is impolitic to keep them, as their litters are apt to be low in number owing to the liability of the sows to become too fat, with the slightest inattention to the amount of food given them.

From the above, it will be seen that Coldwater is a place which will well repay a visit by those seeking horses, cattle, sheep or swine, and that there has already been laid a foundation for the improvement of farm stock of all kinds, which is not excelled by that of any other town of like size or population in the State. The County Agricultural Society here has spacious grounds permanently fitted for its annual meeting and exhibition; and for the purpose of testing the merits of the horses, a trotting course of a full mile in length has been fenced in, and graded. Improvements on the lands and in the stock in the vicinity have received an impetus from the liberality and enterprize which distinguish the wealthier portion of the community, and they in return reap a fair harvest, in the increased value of their property, the greater trade carried on in their streets, and the influx of a producing and consuming population.

The Cape of Good Hope Wheat

J. K. of Vergennes, Kent co., asks, "Has all the Cape wheat frozen out? I received a paper from the Patent office in 1855, labelled *Cape of Good Hope Wheat*, and the contents of which I sowed in drills. About two thirds of the wheat plants which came up were frozen out and only about 11½ lb of second quality grain was harvested. The straw was much rusted, from the soil being too highly cultivated. The land was a heavy clay. Thinking that this variety would acclimate, I determined to give it a second trial, and fair play, and last autumn I sowed my Cape wheat on a sandy loam, cloversod, thus changing the soil. The wheat came up fair, promised well in the fall, and seemed bright when the snow disappeared. But when I took out my gypsum this spring, my surprise was equal to my disappointment, when I found that my Cape wheat had all frozen out, and not a plant was left to show for a sample of what had been sown. I should like to know whether others who have sown this variety have had the same kind of experience. I have three other varieties now under trial, but am not yet prepared to report as to their merits."

Horticultural Department.

Horticultural Medley.

Rain! Rain! Rain! has been the rule, and fair weather the exception, during the past month. On heavy soils it has been difficult to get the ground dry enough for proper tillage, and farmers generally have been unusually late with spring crops, which have, too often, been put in in bad order. The present spring is developing more fully the damages that resulted from the severe winter of '55 and '56, and some trees, that last year gave promise of ultimate recovery, are now dead or dying. From the indications of the present spring, very few peach trees of bearing age will be worth preserving although every tree that is alive is showing fruit. Nearly one half the peach trees that were alive last fall, are already dead, apparently from the effects of the preceding winter. Many sweet cherries, also, which retained their vitality through last season, are now dead; and others still will soon follow, as the disease, once induced, becomes annually more serious, until the tree is ruined. Heart, Bigarreau, and Duke Cherries are showing very heavy crops, while the Morellos, although they blossomed freely, are showing very little fruit in consequence, apparently, of the wet spring, which has encouraged the growth of wood, at the expense of fruit. Early Purple Guigne, and Bauman's May, are now, (June 16th,) showing considerable color, and will be fully ripe, probably, within ten days. During previous seasons they have been fully ripe from the 8th to the 12th of June.

Many varieties of pears and apples are now showing fruit for the first time in this region, although the wet spring, by stimulating the growth of wood, has, in some cases, caused the failure of the fruit. They will be noticed in their season.

The writer has just finished grafting nearly one hundred and fifty varieties of fruits, of the different kinds, obtained from various sources, east and west; many of them for the purpose of unraveling the discrepancies of our western nomenclature, and others, for the purpose of testing the more promising novelties of the day. Shall endeavor to note, in its season, whatever may appear noteworthy, and hope to be seconded by other cultivators in endeavoring to simplify, correct, and enlarge, the limits of pomological knowledge in our state.

Mr. Jas. Clizbe, of Quincy, in Vol. xiv. No. 12 of Mich. Farmer, speaks of an apple which he calls "Virginia Redstreak." I have been unable to find a fruit of this name described in any of our fruit books, or horticultural works, either old or new. Will Mr. Clizbe give us a history and description of the variety through the columns of the Farmer?

In order to guard, as far as possible, against future disappointment, every man who buys and plants a

tree, should, as far as possible, familiarize himself, beforehand, with the habit of the variety—the color of the bark—form of buds, and character of the foliage as described in pomological works. A man, for instance, calls at a nursery to select a Bartlett pear: if he finds the trees to be spreading growers, or with dark colored bark, he may at once reject them as spurious. So also with the soft buds, and upright olive colored shoots of the Madelaine—the dark reddish brown, upright shoots of Forelle—the slender, straggling, and twisting branches of Winter Nelis, and Bourre de Ranz.

Or, suppose a man receives and plants a peach tree. Watching its growth till the foliage is developed, he discovers that the leaf glands do not correspond with the description given in the books—he knows at once that he has been imposed upon—or, if the leaf glands prove correct, by watching the opening blossoms he may find them large when they should be small, or "*vice versa*"; which furnishes another means of identification.

Our nurserymen, especially, are strongly reprehensible for neglecting to apply these tests, at least to their specimen trees. And yet the writer has but too frequently received ocular proof of their habitual neglect of the matter. Wishing to obtain buds of the Malta peach a few years since, the writer "went the round" of the principal Detroit nurseries, for that purpose, finding but a single individual who had taken the trouble to apply the test, although all claimed to possess the variety. In fact the general dissemination of a spurious Early Newington, a Sweetwater, and other peaches, and of Napoleon, and others, for Holland Bigarreau cherry, in utter neglect of the descriptions given in our pomological works, furnish ample proof of the well nigh universal neglect of the matter.

The same practice may, to a great extent, be applied to the apple, and, to some extent, to the cherry. Let every planter of trees, then apply these tests, and never allow himself or others to propagate from such as are not *above suspicion*, at the same time availing himself of the means within his reach for comparison, and identification, *putting aside all synonyms, and always calling things by their right names, when known*; and, in an incredibly short time, our western nomenclature, so long the bye-word of eastern pomologists, may be made a model of correctness, as our native fruits already are a model collection, which the east can scarcely hope to excel.

To insure this so far as our state is concerned, concert of action is indispensable. Unless our State Association can be revived and made efficient for this purpose, we should at once proceed to organize a new association, which, without doubt, should be in the field the coming fall.

Perhaps, as the writer was in no way associated with the previous association, but an interested and

friendly looker on, he may be allowed, without being considered as presuming, to give his impressions respecting it. Probably its name may, with some persons have given occasion for the charge, which some have been heard to make, that it was too much a combination of nurserymen for the sale of trees. Doubtless some occasion has been given for this charge, by the prominence that has been given to this subject in the society's transactions. The objects had in view by our nurserymen, in this matter, are without doubt desirable ones, both to themselves and the community; viz, the exclusion of foreign trees, and a home supply for a home market. It may, however, be urged with much force that the true way to secure this end is, *to secure the entire confidence of buyers, and to furnish a supply adequate to the demand*, when the result sought will follow as a matter of course.

Although in the estimation of the writer the true interests of the nurseryman, and of the grower of fruit, are entirely compatible with each other, if not identical, yet it cannot be denied that many persons interested in the cultivation of fruit, would hold themselves aloof from an organization which they understood to be laboring to enhance the price or increase the sales of trees. Since, therefore, there is, and will probably continue to be, such a feeling existing in community, it would seem to be the dictate of true policy to give the Association a name indicating no particular class; and to be equally careful in its regulations or transactions, to give no especial prominence to any particular interest.

The Association should doubtless provide for the holding of fairs; and to give efficiency and stability to its operations, it should be able to provide a schedule of premiums.

Perhaps it might be considered an offshoot from the State Agricultural Society, assuming the charge of the horticultural department of the State Fairs, and dividing with it the patronage and fostering care of the government. The most desirable, as well as the most permanent, and efficient way, (if it could be effected,) would be to raise a permanent fund for its endowment, and apply the annual interest to the uses specified.

Our State Agricultural School, recently organized, has a Horticultural Department, which, if the horticulturists of our state are true to their interests, may be rendered a valuable help in the way of diffusing a knowledge of improved modes of culture, as well as in the testing of horticultural and pomological novelties. In fact it is hoped that its trial grounds may, at no distant day, become a place where all the varieties of fruit worthy of cultivation, new or old, adapted to our climate, may be found true to name, and under the most approved modes of pruning and culture.

T. T. LYON.

Plymouth, June, 1857.

A State Horticultural and Pomological Society.

In the June number the question was asked, Shall we have a State Horticultural and Pomological Society? The necessity of an organization which would have beneficial influence upon all matters and subjects connected with gardening and orchards is obvious. It is now a well known fact, admitted by all intelligent and observant fruit growers, that seedlings from choice fruit may be propagated, which in our climate will produce fruit more valuable and more perfect than any varieties yet known, which are brought from nurseries at the east. But who is to decide whether these seedlings are worthy of general cultivation or not. The opinion of no one man can set them up, or set them down. It is the collective judgment and discrimination of an association which give force to opinion. How are the faults, or the bad qualities of varieties which are pronounced "the best" elsewhere, to be made known? Not simply by the fault finding of an individual, whose soil, whose practice, or whose locality may each and all be defective or unfitted to grow the fruit to perfection, but by the united opinion of a jury, who have each had an experience with the same noted favorite of eastern catalogues.

Again there is growing up amongst us a great taste for horticultural ornament. Residences are being built not only in the cities and villages, but also all over the country, which are fine specimens of an architecture fitted for the country and to adorn the landscape. To render them perfect however, they need trees, shrubbery, gardens, and these to originate and manage, with good taste, need a guidance which ought to be controlled by the correct opinions of those who are competent to sit in judgment upon such matters. For we need hardly point out how, every spring season, the mercenary agent or dealer, palms off upon the enthusiastic and energetic, but easily duped young gardeners, trash of the most worthless kinds, as choice plants, with Latin and Greek names that sound as though the petal of each flower would at least equal the rainbow in its brilliancy, and as though each young tree was a dwarf which would yield a harvest as luscious and as rich, and as plenteous as those that tempted Perseus to linger in the lap of the fair horticulturists of the Hesperides. It is thus time is wasted, and year after year passes on without marked improvement, because there can be none until knowledge is gained by instruction from competent sources. Now we have enough of wealthy and prominent citizens who are warmly interested in the improvement of Horticulture, who would willingly aid in promoting the permanent establishment of a good, instructive and useful society. For instance during the spring any one may have seen the Hon. G. V. N. Lothrop with a wagon load of evergreens and his arms full of shrubs and plants, wending his way to his country place, to

gratify his innate taste for the beautiful. There is not a more enthusiastic gardener in the state than the Hon. H. H. Emmous, when he gets loose from his dusty tomes of legal lore. So with the present Attorney General. Let any one drop in upon him during a spring morning, and he will be found with a pruning knife in one hand and a transplanting trowel in the other. Many of the wealthiest merchants of Detroit, are enthusiastic lovers of the garden; and green houses, grape houses, flower plats and gardens are flourishing in every direction; but frequently flourishing more by a happy luck, or after a long series of sad experience, than by any well directed effort from the beginning. To such men the recommendations and the encouragement afforded by a reliable Horticultural Society would be of the utmost value, too, for it would save them both time and money, and they would have the satisfaction of knowing that what they had done was not guess work.

Such a horticultural and pomological society should be independent, and separate from the State Agricultural Society. It should be of importance enough to stand alone, and not be placed under the swamping shadow of any other association. Its exhibitions should be separate, and called at the seasons most suitable to give the spring, the summer, the autumn and the winter flowers and fruits, an opportunity of being seen in all their ripeness and maturity.

Such a horticultural and pomological society we can have, in fair working operation this season, and by way of giving it a starting point, we propose that every person who is in favor of getting up a State Horticultural Association will send us their names during the present month, calling a meeting for the purpose of organizing at an early day. These names we will publish, and if each one will name the time and place which the writer prefers for holding the first preliminary meeting, we can give the preference to the place and time which have the largest number of votes, and call it at that place and time.

These are suggestions which have been made to us, and the subject is certainly of importance enough to deserve from horticulturists, gardeners and nurserymen, a little attention. Send us your names for next month, and we will then see whether a horticultural society is really demanded by the rural interests of Michigan.

A new Ornamental Plant.

We perceive that a new and beautiful plant is being introduced to public notice in London, which was one of those sent from northern China by Mr. Fortune, the collector for the London Horticultural Society. It is named the *Farfugium grande*, and is represented as a species of Tusselago, or Coltsfoot. This plant, says LINSLEY, in his description, has

large round, angular, heart-shaped evergreen, leaves, sometimes more than two feet in circumference, of a peculiarly bright emerald green, copiously blotched with patches of clear yellow. The leaves stand on woolly stalks, twelve or fifteen inches long, and form a magnificent tuft of surpassing beauty. If, as is supposed, they shall continue to be evergreen during winter, they will form an object in the flower garden without a rival at that dreary season. The flowers of the *Farfugium* are insignificant. They are small and stand in clusters at the end of a scape, having a yellow ray with a dullish purple centre.

A good hardy Plant.

Every one who can, should procure a good plant of the *Dielytra spectabilis*. In the first place it is a beautiful flowering plant; next, it is very hardy and will stand the winter as easily as the peony; next, it keeps flowering until cut off by the cold weather, and next, it may be taken into the house, where it will stand any amount of reasonably bad treatment, and still keep flowering. Adair, and Hubbard and Davis have a few plants of this new species, and we would heartily commend it as one of the best acquisitions our gardens have had for some years.

Horticultural Notes.

Soft soap and scotch snuff, mixed, is recommended as a good application to prevent the apple tree borer from depositing its egg. It should be applied two or three times during the summer season to the height of about eighteen or twenty inches from the ground.

A writer in the Genesee Farmer, gives the following relative to the plum and the curculio: "It is well known that the plum is a marine plant, and where the salt spray breaks over them the fruit ripens well, while upon the heights above, the whole crop is frequently lost. For a remedy, apply a weak solution of salt and water to the earth around the tree, during the curculio season, as the young of the curculio cannot live in ground saturated with this liquid, the insect may be got rid of in this way."

EXTRAORDINARY.—A gentleman of Romeo has a strawberry vine in his garden, proceeding from one root, which has on at the present time, blossoms to the amount of *four hundred and forty-four*. The truth of the above statement can be vouched for by a number of our best citizens. Who can beat it? says the *Argus*, June, '57.

THE APPLE WORM.—Every apple that falls from trees in an orchard from this time forth should be picked up, and given to the hogs or cattle. The "windfall," or rather the "moth-falls," as they should be termed, contain the grub of the Codling Moth, an insect which lays its eggs in the fruit, where they are hatched in; the grub or maggot eats its way into the core, causing the fruit to fall, it then leaves it and crawls to the bark of the tree where it spins its cocoon, and in the spring becomes the parent of another race. Where the injured fruit are destroyed as fast as they fall, by being fed to cattle or hogs, the number of insects are lessened in that orchard at least. Early and autumn apples suffer most from this pest, and propagate the most, winter apples suffer less.

The borers have destroyed a large number of the locust trees in the city of Detroit this season. The wet weather seems to have favored their labor. Hardly a tree is to be seen that is not infected with them.

Strawberries are very plenty this season in all the large cities at the east. It is strange that more attention is not given to their culture on a large scale close to the city of Detroit. They are higher in price here than in any other city of equal extent. They should be as plenty here as in Cincinnati.

Bees - Their Swarming.

The wet cold weather of June seems to have delayed the swarming of bees until the last part of the month. We have heard of but few swarms that issued before the 20th. We had a strong hive that wintered well in one of the Gilmore houses, which did not send forth its first swarm, until the 26th. This is generally considered late. The swarm was hived without difficulty, having first lighted on the top of a young cherry tree, and remained there about fifteen minutes, it then lit on the ground immediately under the tree. The bees covered a circular space of about two feet in diameter. The hive was immediately placed over the swarm, being supported on two long strips of wood, laid on a couple of blocks of fire wood. A sheet was thrown over the whole, and in less than ten minutes the bees were clustering into the hive. The first swarm that issues from the hive, is generally a very strong one, and every preparation should be made to secure it before hand by having the hives in readiness. The second swarms which issue are generally only half as large as the first, and when a third swarm takes a departure from the parent hive it is only half as large as the second. The first swarm also, is led out by the old queen, all other swarms are led by young queens. Quinby affirms that, in prosperous seasons, when the first swarms have not been kept back by foul weather, the second will issue in eight or ten days afterwards, and when eighteen days pass without any swarm issuing, then there will be no more swarms issue that season, and the hives need be no longer watched for the purpose of securing them. On the seventh or eighth day from the issue of the first swarm, the bee keeper should put his head to the hive, and he will hear the *piping* of the queens, sometimes of more than one, in which case the challenge will be shrill and clear, and the response hoarse and dull. When this noise is not heard, no second swarm will issue. Sometime this piping is heard three or four days before the swarm comes out, their issue depending somewhat on the weather, and on the supply of honey. The new swarm, before going out always fill themselves with honey, and it is estimated that a good strong hive will take away with them about five pounds.

Hives should be uniform in size, and contain about 2000 cubic inches, or be about twelve inches square, by fourteen inches in depth. The top of the hive should be made of inch stuff, rabbet all round so as to fit close on the sides. On the top should fit closely a box for the storing honey, not over seven inches high, and connected with the hives by a range of holes made in the top of hive. This is the form of hive used by the most successful bee keepers. But bees whether in one hive or another, must have close attention to be profitable.

The Household.

"She looketh well to the ways of her household, and catcheth not the bread of idleness."—Proverbs.

EDITED BY MRS. L. B. ADAMS.

On the Old Farm.

BY J. W. WEBSTER.

Our pleasures and our joys are many,
Though it is our lot to toil,
And we feel as proud as any
Who ever trod the soil,
On the Old Farm.

We had happy youthful days,
In the time long past and gone,
With our sportive, childish plays,
Whene'er our tasks were done,
On the Old Farm.

Some may say our rugged labor
Overbalances our joy,
But I'm sure 'tis independence
Thou: to be a farmer's boy,
On the Old Farm.

We are plowing up the soil
To benefit the nation,
And ever by our honest toil
We help support creation,
On the Old Farm.

We can gather wildwood flowers
In the freshness of their bloom,
And with them beautify the towers
Around our cot's age home,
On the Old Farm.

We can have their honeyed fragrance
Wafted to us on the air,
And while we enjoy the sweetened,
It lets us know we are
On the Old Farm.

We can find true happiness
In plowing up the sod,
For we know a blessing follows
Sent us from the hand of God
On the Old Farm.

When we sow the precious seed
On the well-tilled fruitful soil,
We know a harvest rich indeed
Ever will repay our toil
On the Old Farm.

But soon our labors will be past,
And our pleasures here below,
And if God our hearts has blessed
To this better land we'll go,
From the Old Farm.

Napoleon, Mich.

Air and Exercise for American Women.

Few subjects have been more harped upon by the American press, especially the agricultural portion of it, within a year or two past, than the above. One can scarcely open a paper without seeing a paragraph or chapter full of regrets and laments for the short-lived freshness and beauty of American women, and charging it all upon their voluntary confinement in close rooms, and neglect of exercise, while nearly every other line goes off in ecstasies over the substantial charms of English women, ascribing their prolonged

youthfulness and permanent bloom solely to their remarkable feats of pedestrianism. These assertions may all be facts. It may be true that the women of a whole nation are, with one accord, wilfully bent on destroying their beauty, shortening their lives, and making themselves generally as miserable and unlovely as possible. But, laying the newspapers aside, let us look at the every day life of American women as we find it and know it by actual experience. In the first place, however, we protest that it is unfair to institute comparisons between the people of two countries where the prevailing customs, but more especially the climate, and its effects upon the human system, are so unlike as are those of England and America. I have been told by English women living in this country that they found it impossible to keep up their old country habits of regularly taking long walks, on account of the enervating influence of our sultry summers, and the extreme severity of our winters. They can and do walk, it is true, more perhaps than American women are accustomed to, but not with the same results to which they had been used. Think of the difference between a climate where flannel under-clothes are worn with comfort the whole year through, and one like this, where for days and weeks, and sometimes for months together, the lightest gossamer seems a burden to those who are obliged to exercise in the open air, or rather in the arid glare of our summer sun. But with all these disadvantages of climate, there are still favorable seasons enough for all necessary out door exercise, if other circumstances did not interfere to prevent the enjoyment of them. It is these "other circumstances" that we wish to hold up before the eyes of American editors, and against which we ask them to level their batteries, instead of blindly showering abuse and blame upon heads and shoulders already fainting beneath the burdens heaped upon them.

American women, as a class, are working women, or, in other and more appropriate words, they are household drudges. The experience of farmers' wives is admirably and truthfully summed up in the following extract from the *Springfield (Mass.) Republican*:

"The life of the farmer is so often made the subject of complimentary remark, so often praised for its peacefulness and independence, that the farmer's wife might, very rationally, be supposed to be the happiest woman in the world. From her relation to the 'lords of the soil,' she should be the lady of the soil, a peaceful, healthy, independent woman. That the reverse of this, is the general fact, will be universally conceded by the wives of the farmers.

A young farmer arrives at the age when he thinks it time for him to get married and "settle down." He has had a respectable education, and wants a woman who is his equal. He looks about him, and makes his choice. She is a girl bred beside him in the country, has been well educated, reared by careful parents, and is, in the truest sense, a lady. She

loves books, possesses skill and taste in music, and is, in all points, fitted to reign the queen of a happy home. She becomes the wife of the farmer, is ambitious to do as much as her neighbors, and her husband is soon avaricious enough to allow the woman of his love to become his most devoted drudge. From thenceforth, her life is one of the most unrelenting toil. It is nothing but mend and patch, cook and bake, wash and iron, churn and make cheese, pick up chips and draw water, bear children and nurse them. The family enlarges, the husband grows wealthy, becomes important in community, rides to town every day, takes his ease when he chooses; but the cares of his faded and broken down wife, know no relaxation. She may outlive her husband, but rarely does; and, not unfrequently, a second wife comes in to share in the money that should have been enjoyed by her predecessor, through a quiet old age of rest.

This is no fancy sketch; it is drawn from life; and, in every country town and neighborhood, its truthfulness will be recognized. Now we despise the good-for-nothings of fashionable life, as much as any one, and have no affection for drones in any hive. We are aware that circumstances sometimes demand extreme labor of the farmer's wife, but in New England, these circumstances do not prevail. And while we would leave no woman to eat the bread of idleness, we would see the class of which we are speaking, released from that circle of everlasting drudgery, which deprives them of the privilege of relaxation for a day, and the time which they would gladly devote to the maternal education of their children.

From this life, the girls of our day are learning to shrink; not because they are lazy, but because they know they are to be sacrificed. Not because the calling of the farmer is not respectable, but because they do not wish to become his mistress—maid-of-all-work, nurse and boot-jack. Now the foundation of all this wrong, is in that avaricious spirit, handed down from father to son, which makes the dollar the standard of respectability, and land the only fountain of happiness. We hope to see the day when the farmer's wife shall share in the peacefulness and independence of the farmer's lot; and we call upon the ladies to engage in the reform themselves, and to teach the lords of the soil, that there is something to live for besides potatoes; and that life can be enjoyed more truly, by a proper preservation of the health, beauty, accomplishments and good spirits of their companions."

But this experience is not confined to farmers' wives alone, just such women are dragging out their existence in the kitchens of mechanics and professional men. They are everywhere to be found—in cities, in country villages, and in isolated farm houses. The world does not know it, simply because the world does not go into the kitchens and nurseries where the drudgery is done; it only goes into the parlor, and while making a formal call, contrasts the cheerful cleanliness and comfort there apparent, with the faded face and listless form of the mistress, whose duties are momentarily suspended for its entertainment; or, it sits down to an excellent dinner in the well-furnished dining-room, where the master of the house, full of energy and active life from his "out door exercise," and contact with the world, forms a striking contrast to the weary spiritless being at the

head of his table, who never thinks of joining in conversation, not only because she has nothing to say, but because her head is throbbing with the heat of the kitchen fire, and her mind yet full of the perplexities of the forenoon's preparation for the comfort of her husband and his guests. The world is astonished at such a woman. It sees her surrounded by all that woman needs to make her happy and cheerful. It knows her years ago, when not a gayer heart or brighter face was found in the ball room, no one was more ready and intelligent in conversation or more gifted in all the social accomplishments which are the charm of woman. She was the life of her father's house, the brightest ornament of the social circle in which she moved. Where are her charms now? She married, went to housekeeping, shut herself away from society, neglected the arts she had practised to please, and is no more company for her husband than if she were only his servant instead of his wife.

Thus the world says, and it says truly, for a servant she is, and nothing more. "Give her more air and exercise," says the world, "oblige her to go out and take long walks in the open air, as the English women do; then the roses will come back to her cheeks, the strength to her frame, the cheerfulness to her temper, length of years will be added to her life, and she will be an object of love and admiration instead of pity."

Give her more help in the kitchen, say we. Loose the chains of necessity that confine her to that treadmill round, give her a chance to breathe the free air of heaven as she breathed it in her girlhood's days, give her time to think and read and talk, and there is little doubt but that she will compare favorably with any English woman possessing equal advantages. Her husband has help on the farm, in the shop, in the office, behind the counter—everywhere, and she must work for, and wait on them all. He could not carry on such a multiplicity of business alone. It would ruin his health to be so confined. If he were in the wife's place he would have a servant for each room, and perhaps one to attend upon his person besides. But as it is, he has so much other help to hire that none can be afforded for the house—they must economise somewhere, wife must work along as best she can till the children are old enough to help, and then they must pay for their bringing up and give her some rest. It is fortunate for them if her rest is not in the grave before they are half grown, or capable of taking care of themselves.

Now we do not by any means charge the blame of all this wrong upon the husband, though the greatest fault is certainly his, because having the power to remedy the evil, he shuts his eyes to the result, and perseveres in his system of short-sighted, false economy. The woman who loves him and is willing to do anything or make any sacrifice for his prosperity, does not know what a life victim she is

making of herself when she first consents to this one-sided economy and unequal division of labor; and having once taken up the burden it is hard to find a convenient place to lay it down again. On the contrary, she soon comes to regard it as a matter of necessity, a settled consequence of her sex and marriage. Months and years multiply and add to the weight of cares and labors falling to her lot, and because she has borne up so long, and wrought so bravely and so patiently, no one thinks she should do otherwise, no one dreams that she can ever be weary, or that her strength can ever fail. It becomes a matter of course that the cares and anxieties of the family must all rest upon her, and what wonder if intelligence dies out of her mind, and beauty and freshness vanish from her face and form?

It is wrong in the husband to require or permit such a sacrifice, and wrong in the wife to endure it. Let both consider that unbroken health, cheerful company, occasional leisure and recreation are just as necessary to the enjoyment of life for one as for the other. We will venture to say there is scarcely a family where this one-sided management exists, and where it has been thought a necessity that might not, with a little attention, and with infinite advantage to themselves in every point of view, change this unpleasant and unjust order of things. Try it, husbands and wives, and see if greater happiness and more abundant prosperity are not the result.

There are two classes of housewives not included among those spoken of, for whom we feel a sort of angry pity, but who we know can never be moved from their course by any consideration; and though it may be useless to waste words about them, we intend to notice them in a future number.

RECIPES, GUARANTEED GOOD.—For preserving *strawberries*, the largest and finest should be chosen, and it is best to gather them in dry weather. They should be carefully hulled and spread on large dishes to prevent their being crushed. Weigh a few at a time, and allow a pound of loaf sugar to a pound of fruit. Dissolve the sugar over the fire in a very little water or the juice of inferior strawberries. Then add the fruit, moving gently the kettle to prevent its burning. Let them boil slowly about twenty minutes; then put them up in small bottles, cork, and seal immediately; place the bottles in the bottom of a box, and cover entirely with dry white sand. They may be well preserved in this way for 2 years.

Iced Fruits.—Take fine bunches of ripe currants on the stem, dip them in stiff gum-arabic water, or in or in the white of egg well beaten, lay them on a sieve, sift white sugar over, and let them dry. They are very nice for dessert or for the tea-table.

Bunches of grapes, cherries, or plums may be done in the same way.

Mock Lobster.—Take some cold veal, (either boiled or roasted), cut it in small pieces, season with salt, pepper, mustard, vinegar, and sweet oil. If preferred hot, leave out the mustard and oil, and put in a piece of butter instead. Put all together in a sauce pan, place it on the fire, and let it get hot; then serve it immediately. This makes a fine relish for tea or breakfast.—*Homestead.*

Currant Jelly—Strip the currants, put them in a jar, set the jar in a kettle of hot water, let it boil an hour, then throw the currants and juice into a fine lawn sieve or a flannel bag, press out all the juice, and to every pint of juice put a pound of refined sugar; put them in a preserving pan, set it over a charcoal fire, and keep it stirring till it is in jelly, which you will know by taking a little out to cool; be careful to take off the scum as it rises, and when it is jellied and very clear pour it into glasses. When it is cold, cover it with white paper cut so as to fit inside the jar and lie close to the surface of the jelly, the paper being first well saturated with brandy; then cover the jars with paper caps tied close down.

Letter From a Printer Boy.

EDITOR FARMER:—Although I am a printer boy I cannot help reading the *Farmer* as soon as I get spare time; and I think it more interesting than any other paper or pamphlet that comes to our office. It reminds me of what they are doing out on the farm. I can remember of my father taking the *Farmer* as much as eight years ago, and since he died, which was in 1851, my uncle has taken it. When I read over what my young friends say about their papas, it almost makes the tears come into my eyes in spite of all I can do; and I hope that none of them will neglect to appreciate a father's kindness till it is too late.

Yours,

D. C. HOLMES.

A Post Office Enigma.

I am composed of 22 letters. My 2, 12, 7, 9, 6, is a post office in Georgia. My 13, 6, 15, 9, 17, 18, 5, 20, 6, is a post office in Missouri. My 11, 22, 15, 14, 16, 10, is a post office in Maine. My 21, 18, 7, 9, 2, is a post office in Michigan. My 9, 12, 8, is a post office in Louisiana. My 1, 6, 15, 9, 21, 2, 8, is a post office in California. My 19, 23, 13, 15, 12, 20, is a post office in Virginia. My 4, 15, 18, 19, 2, is a post office in Texas. At my whole there is a distributing post office.

H. CAMBURN.

Tipton.

Michigan Geographical Enigma.

I am composed of 26 letters. My 2, 8, 7, 5, 16, is a county. My 6, 4, 5, 9, is a river. My 14, 25, 19, 3, is a river. My 11, 12, 22, 2, is a county. My 15, 26, 8, is a town in Monroe county. My 18, 6, 9, 2, is a lake and river. My 17, 25, 23, 1, 2, 13, is an island. My 17, 28, 20, 21, 10, is the name of a river, lake and island. My 24, 23, 2, 17, 5, 13, is a town in Lapeer county. All the above will be found on the map of Michigan. My whole is owned by a Company and is a great benefit to a portion of the Michigan Farmers.

ALONZO PROCTOR.

New Hudson.

Answer to Miscellaneous Enigma in June—TERRA PRIMUM VISA. **Answer to Enigma**—NEW HAMPSHIRE. Answered by Kate Richman, Saginaw City; G. H. Place, Novi; Louise Woodman, West Novi; R. H., West Berlin; E. T. Brown, Locust Grove.

Elizabeth W. McKenzie, of Montrose, Genesee Co., gives the following poetical solution to one of the enigmas in the last number:

The *Sheep* are very useful, of that we all are sure;
In Europe flows the *Rhine*, with its limpid waters pure,
The *Wren* may build its nest where the river *Rasin* flows;
The *Hen* is a domestic fowl, as every body knows;
That the *Pan* is indispensable the well-kept dairy shows.
Without the *Map* the traveller must use the beacon fire
Or run the risk of being lost in the wilds of *New Hampshire*.

In doubt and fear, with humble grace, this answer now is sent,

That John and Emma may receive my kindest compliment

Answer to Charade in June number—SIDEWALK.

MICHIGAN FARMER.

ROBERT F. JOHNSTONE, EDITOR.

DETROIT, JULY. 1857.

State Fairs for 1857.

Connecticut, at Bridgeport, October, 13, 14, 15, 16.
Canada East, at Montreal, September 16, 17, 18.
Illinois, at Peoria, September 21, 22, 23, 24.
Indiana, at Indianapolis, October 4, 5, 6, 7, 8, 9, 10.
Iowa, at Muscatine, October 6, 7, 8, 9.
Kentucky, at Henderson, October 12, 13, 14, 15, 16.
Massachusetts, at Boston, October 21, 22, 23, 24.
Michigan, at Detroit, September 29, 30, October 1, 2, 3.
New York, at Buffalo, October 6, 7, 8, 9.
Ohio, at Cincinnati September 15, 16, 17, 18.
Pennsylvania, September 29, 30, Oct. 1, 2.
Wisconsin, at Janesville, September 27, 30, & Oct. 1, 2.
United States Agricultural Society's Trial of Harvesting Machines at Syracuse, N. Y., July 13.
U. S. Ag. Soc. Exhibition, at Louisville, Ky, Sept. 1, 2, 3, 4, 5, 6.

County Fairs.

Hillsdale, Jonesville, October 13, 14.
Ionia, Lyons, September 23, 24, 25.
Jackson, Jackson, October 7, 8, 9.
Ottawa, Eastmanville, September 22, 23, 24.

The State Fair.

The business committee of the State Agricultural Society after examining carefully the proposition relative to the location of the grounds have decided that it is for the best interests of the Society that the fair should be held this year on the same ground at Hamtramck at which it was held last season. We shall publish the whole programme of operations next month, as it is not yet fully made out.

There will be no female equestrianism. This notion has been given up, and we think it a judicious and proper determination on the part of the committee.

There will be no match of horses, but their speed will be tried with reference to time alone. Arrangements will be made so that sufficient boats will be put on between the city and Hamtramck landing to render the fair easy of access. The landing is to be extended; so that running aground will be out of the question. The general arrangement for each days business will be somewhat similar to that of last year.

The experience of last season has not been lost on the Committee, and Mr. Horace Welch, the chairman, is applying himself with all his well known energy, backed by last year's experience, to get up a fair ground and arrangements which will give general satisfaction.

The College and its Regulations.

The Faculty of the State Agricultural College have issued a pamphlet which contains the names of the officers of the Institution, a list of the Students, the constitutional provisions and the laws relating to its organization, the proceedings at the opening, and a brief succinct summary of the terms of admission,

the rules and regulations, the studies, and other general information relating to the management of the College. This pamphlet will be furnished on application to the President or Secretary of the College. By it we perceive there are some vacancies not yet filled up.

We perceive the Faculty have decided that the law of organization does not permit them to admit students from other states. The clause on this subject is in section 5 of chap. 130 of the Session Laws of 1855, and reads as follows: "Tuition in said institution shall be forever free to pupils from this state, and any number of pupils may be admitted, who shall apply from any part of this state." In section 4, of the same law it is stated, that the chief purpose and design of the institution is "to improve and teach the science and practice of agriculture." It is not defined who shall be taught, and we think the clause relating to the admission of pupils only defines which students shall be admitted *free* and does not forbid the Faculty or Board of Education from adopting rules and regulations which may permit the "science and practice of agriculture" to be taught to all who may seek such an education, on the payment of the fee, where there are not applicants to fill the vacancies. For instance, suppose that a number of young men from a neighboring state should apply for leave to attend the classes in chemistry, in physiology, and in botany, and in horticulture, on account of superior methods and facilities afforded for instruction, boarding themselves in the village of Lansing, and giving at the same time full guaranties for good behavior and the payment of the fees deemed proper to charge them. Does the law mean that these persons shall be deprived of the advantages of the College, and that our state shall be so exclusive as to debar the citizens of all other states and countries from one of her halls of learning? We think not.

The American Herd Book. Vol. 3.

Lewis F. Allen, the indefatigable editor of the Short Horn Herd Book has just issued the third volume of this most valuable publication, a copy of which has been forwarded to us. In this volume, the editor has recorded the pedigrees of more than three thousand animals, but very few of which are repetitions of those already published in the preceding volumes. The volume itself is the best evidence of the rapid growth which this family of cattle has made in the estimation of the American farmers, and stock breeders. It is only about a year and a half since the second volume was published, and yet here is a third volume, larger and fuller than its predecessors. In this volume, Mr. Allen corrects the errors which had crept into some of the pedigrees published in the previous volumes. The portraits are numerous, and appear to be executed with great care. The printing is clear, and easily read, and the volume is a most respectable addition to the library.

Of the service which such a volume is to the stock of the United States, there can be but one opinion. It is invaluable and Mr. Allen speaks correctly when he says that "no one can become an intelligent and successful breeder

who is not intimately acquainted with the Herd Books, and the origin of the leading and popular strains of Short Horn blood." The price of the volume is \$6.00, and the express charges.

COUNTY FAIRS.—It is desirable that the Secretaries of the several county societies should forward to us at an early day, the times and places when their fairs for the present year are to be held. Many exhibitors will be determined as to their visits, by knowing how to plan their arrangements so as to be present at as many of them as may be combined in one round. Besides, there is no other medium by which a knowledge of the time and place of holding the fairs can be so extensively advertized as through our columns. These facts should induce the county officers to let us know about their fairs at an early date.

FRENCH MERINOS.—We perceive that J. D. Patterson of Westfield Chautauque Co. New York, still obtains remarkable prices for his French Merinos. The California steamer which sailed on the 20th of May, from New York, took out two young rams and two young ewes for a Mr. Samuel Brannan of that State. These sheep were purchased from Mr. Patterson for *fourteen hundred* dollars, or at the rate of three hundred and fifty dollars per head. A ram of the same stock was lately sold to a gentleman of Georgia for three hundred dollars. These are prices!

We have on hand several communications, which came too late. C. A. C.'s was not received till the 24th. Mr. Shepard's gate and fence is getting ready for August. Others have been unavoidably postponed for want of room.

THE WAINWRIGHT SALE OF DEVONS.—This sale of Devons took place on the 17th, and only 17 head were sold. May Boy, a very choice bull, brought only \$300, to go to Boston, Mass., and was the highest priced animal sold. Chibiabos was next, \$185 being paid for him by John Wentworth of Chicago. The highest priced cow brought \$155. The average price for the whole herd was \$138.50 per head.

SALE OF SHORT HORNS.—R. A. Alexander, the great Short Horn breeder and importer, held his sale of stock at his farm near Midway, Woodford Co. Kentucky on the 3d of last month. There were 31 bulls and 33 cows sold. The bulls averaged \$326.10 each, the highest price given being for Oliver, \$725, and the lowest \$105. The cows and heifers averaged \$216.33 each. The highest price paid being for "Tulip," \$490, and the lowest \$95. This may be considered a good sale. A young bull, named "Duke of Airdrie," was let at \$1250.00 for the season, and two others at \$515, and \$315 respectively.

CORRECTION.—In the communication of A. C. Briggs in the June number, page 175, instead of one bushel of mixed clover and timothy seed being sown to the acre, it should read, "one bushel to four acres;" and instead of "three bushels of plaster to every ten acres," read "three barrels."

A subscriber wishes some of our readers to give him the benefit of their experience and practice in killing out Canada thistles.

We have deferred a notice of some fine colts of the Abdallah stock, and swine of the improved Essex and Berkshire breeds, owned by E. N. Wilcox, Esq. of Detroit, until the next number. We have also on hand a splendid engraving of Mr. F. E. Eldred's horse Hambletonian.

We are indebted to the bureau of topographical engineers in this city for a chart of the survey of the Straits of Mackinaw. This survey is a work we consider almost as important to the interests of agriculture in this State, as to those of navigation.

From Foreign Journals.

Drilling Clover Seed.

According to the report of a practice upon a farm near Chelmsford, in England, the drilling in of clover seed has been found not only a great saving of seed but also has rendered the crop more certain, and of better quality. The writer says clover and all other seeds have been drilled upon this farm with the most successful results as regards the plants; indeed, we feel that no other mode is more certain, and feel assured that two thirds the quantity of seed will more certainly secure a crop by drilling, than one third more would effect if sown by hand, ten pounds of clover being ample per acre when drilled properly. Is this not worth a trial here, where clover is so important a crop, and especially now when the price of seed renders a saving of a third sufficient to pay the interest on a considerable of an amount invested in seed drills. Few will pretend that a field of ten acres of clover can be well seeded with less than two bushels of seed, or 120 pounds. Should the drill save one third of this and at the same time produce a crop one third better, and with more certainty, the drilling of clover seed should certainly be considered a matter worth the attention of western farmers.

Cattle Diseases in Europe.

The Agricultural papers of the old world teem with warnings against permitting the spread of a cattle murrain which is committing most dreadful havoc among the herds of eastern Europe, and which is spreading with rapidity westward. There are two diseases, one known as pneumonia or lung disease; the other is called a murrain. This latter is the most virulent epidemic which has ever been known among cattle, and attacks cattle in their intestines and spleen, bringing on death in a few hours. The dread of this scourge is so great in Prussia, that not only are all the beasts infected with it slaughtered immediately, but also every animal which has been in contact with them, and the carcasses are buried in pits not less than eight feet underground, with a covering of quicklime. Discussions have been held by the managing directors of the Agricultural Society on the question of memorializing Parliament to forbid the introduction of cattle, or their remains, such as hides, hair, bones and meat, from all countries in Europe, except Spain and Portugal. The most stringent police regulations have been adopted by the Russian, Prussian and Austrian authorities, to prevent cattle infected with this murrain from passing their borders. The localities where the disease has made its first appearances are Podolia, Bessarabia, and the Danubian Principalities. During 1827 and 1828, a disease similar to this murrain carried off 80,000 head of cattle in Hungary; 12,000 in Galicia and 9,000 in Moravia.

Locusts in Australia.

The colonies located in Western Australia, suffer severely from swarms of devouring locusts, which appear every season in such numbers, and with such an insatiable hunger, that everything green is destroyed by them. They attack the potatoes, the vines, the fruit, in fact everything and completely destroy all chance of a crop. No means of destroying these pests have as yet been discovered.

Salt as a Manure for Mangel Wurzel.

In preparing a field for growing a premium crop of Mangel Wurzel, a root highly esteemed as winter food for cattle, we note that on each acre ten tons of stable manure, were first carted on and spread, then a compost of two hundred weight of rape cake, ground, four hundred weight

of salt, and two hundred weight of Peruvian guano, was sown by hand, and when the seed was drilled in one hundred weight of superphosphate per acre was drilled in with it to give it an early start, and luxuriant growth. We should like to see the field of corn that such a treatment would grow.

A new and Inable Va Disinfecting Agent.

A Dr. Angus Smith of Manchester, England, lately read a paper before the Society of Arts, London, England, in which he stated that he and a friend named McDougall, some yeas ago had made numerous experiments to find out a good disinfecting agent, and had at last found that Sulphite of Magnesia, which is procured from Magnesien Limestone, and a certain per centage of carbolic or phenic acid, which is procured from coal tar, made a disinfecting powder of remarkable efficacy. The mode of using this powder is to first sweep the stable, then sprinkle it with the powder, the quantity being about the same as that of sand to sprinkle a floor. Then the litter is thrown over this. This powder has been found so powerful and completely effective, that when introduced into stables where sick and wounded army horses were, no disagreeable odor was perceptible either from the wounds or the faeces. A stable keeper who always kept on hand a large number of horses, found that by using this powder, his horses were healthier, lung diseases had disappeared, or decreased; while their eyes and health did not suffer from the irritating effects of the ammonia which is to be found in all stables. It was also found that the stable was cooler, and that the dung did not decompose so that flies did not breed in it, and there were fewer of these pests to annoy the beasts. Mr. Murray, the stable keeper, also found that after the manure of his stable in which he had used this powder had been used one year, he was offered double for it next year by the market gardeners who had purchased and used it. As Dr. Smith was not a trading man, had no interest in manufactures, and did not mean to have, his statements in relation to this matter are considered reliable and disinterested.

To cure Poultry of Lice and other Parasites.

John Douglas, a regular poultry breeder, and who sometimes has 2,000 head under his charge, writes to the Agricultural Gazette, that where poultry is kept somewhat confined, they are apt to get infested with lice. This is particularly the case with sitting hens. He recommends that with the lime and sand, in the dust corner, where the poultry will roll there should be mixed half a pound of Black Sulphur. This will not only keep the fowls free from parasites, but will also give their plumage a fine glossy, healthy appearance. Where fowls are infested badly, Mr. Douglas, first damps the skin under the feathers, and then dusts on the Black Sulphur. The insects will disappear in about twenty-four hours. Mr. Douglas once had charge of an ostrich, which was pining from the effects of lice with which he was infested. The feathers next the skin were damped, and the Black Sulphur applied. The lice were found dead the next day, and the ostrich recovered rapidly.

A Rare Mexican Conifer.

The distribution of plants of the new and rare Mexican Coniferous plant bearing the name of *Chamæcypariss thurifera*, is exciting quite a competition amongst the members of the London Horticultural Society.

QUALITY OF BEEF.—At the international Fat Cattle Show, at Paris, the beef of the prize animals was brought to the table roasted. The Judges awarded as to quality: West Highland, ox, Scotch, first; Devon ox, second; French ox, third; Short Horn and Angus, Scotch cross, fourth; Angus, Scotch, fifth; French ox, sixth; Short Horn, English, seventh; French, eighth. For soup and boiled beef the Short Horn English ox, first.

Michigan Stock Register.

Shorthorns.

[NOTE.—The letter E after a number stands for ENGLISH HERD BOOK; the letter A after a number stands for ALLEN'S AMERICAN HERD BOOK.]

No. 38.—YONONDIO. Bull, 1116 of American Herd Book, red and white. Bred by T. H. Newbold of Caledonia, Livingston Co., N. Y. Owned by M. L. Brooks of Novi, Oakland Co., Mich. Calved June 1847. Sire Old Splendor, 767 A.

Dam, Lady Morris, got in England by Priam 4758 E.
g. dam, Dione, by Monarch 4494, E.
g. g. dam, by a son of Comet 155 E.
g. g. g. dam, by Cupid 177 E.
g. g. g. g. dam, by Favorite 252, E.
g. g. g. g. g. dam, by Hubback 319 E.

No. 39.—DUKE. Bull, red roan, bred by and the property of M. L. Brooks of Novi, Mich. Calved April 1, 1854. Sire, Defiance.

Dam, White Lady, by imported Shipboard.
g. dam, Moss Rose, by American Comet, 9, A.
g. g. dam, Red Rose, a cow bred by Thomas Weddle, from an imported cow bred by Major Bower of Yorkshire, England.

Defiance, was calved April 6, 1840, and was sired by Rover; he by Rover imported by Thos. Weddle. This bull was registered in the English herdbook as Charles, but we have not his number. The dam of Defiance was Betsey Blossom, a cow considered one of the best in her day; her sire was Napoleon, bred by Col. Dwight of Mass. Defiance was the sire of the famous heifer Jenny Lind, which was exhibited at the World's Fair New York, and when butchered whose quarters weighed nearly 2,000 pounds. Defiance was also the sire of the famous Murray ox, that sold in New York for \$500. Mr. David Brooks states that this bull weighed when but four years old 2500 pounds, and that he has done more to aid in improving the cattle of western New York than any other single animal in the state.

No. 40.—WHITE ROSE. A cow. White, bred by M. L. Brooks of Novi, Mich. Calved April 20, 1856. Sire, Duke, 39 Mich Stock Reg.

Dam, Ida May, by Young Romeo, 1159, A.
g. dam, Bell, by Yonondio 88 Mich. Stock Reg.
g. g. dam, Star, by Old Splendor, 767.

Young Romeo, was out of Romeo, he by Remsen 145 A. out of Lady Morris. (See No. 38.) Dam was Lily of the Valley by Oregon 773 A; g. dam, Molly 3rd by Old Splendor 767 A; g. g. dam, Molly 2d by imported Windle 185 A, 5667 E; g. g. g. dam, Molly, a cow bred from the imported stock, of Mr. Delancy of Philadelphia.

No. 41.—MAYFLOWER. A cow. Red. Owned by M. L. Brooks of Novi, Mich. Calved May 16, 1852. Sire, Rocket, 920 A.

Dam, Lady Weddle, by Old Splendor, 767 A.
g. dam, Moss Rose, by American Comet, 9 A.
g. g. dam, Red Rose, bred by Mr. Weddle of Rochester N. Y. from one of his imported cows bred by Major Bower of Yorkshire, England.

Rocket was bred by James Wadsworth of Geneseo, N. Y. and was sired by imported Young Rocket 4979 E; his dam was a cow imported by the Sciota Valley Co., in 1834. Young Rocket was bred by Mr. Robert Sharp of Craw,

near Skepton, Yorkshire England, and imported by Mr. Whitney of New Haven; he was calved in 1838, sired by Norfolk 2877 E, out of Carnation by Tarsus 2740 E; g. dam, by Wellington 2826 E; g. g. dam, by Waitz bull; g. g. g. dam, by Mr. Hutton's Bull.

No. 42.—IDA MAY. (P 403, vol. ii, A. H. B.) Cow. Roan. Bred and owned by M. L. Brooks of Novi, Mich. Calved June 20, 1853. Sire, Young Romeo 1159. (See 40 Mich. Stock Reg.)

Dam, Belle, by Yonondio, 1116 A.
g. dam, Star, by Old Splendor, 767 A.
g. g. dam, by Remsen 145 A.
g. g. g. dam, by imported Windle 185 A.
g. g. g. g. dam, Lady Morris, by Priam 4758 E.
g. g. g. g. g. dam, imported Dione by Monarch 4494 E.
g. g. g. g. g. g. dam, by a son of Comet, 155 E.
g. g. g. g. g. g. g. dam, by Cupid 177 E.
g. g. g. g. g. g. g. g. dam, by Favorite 252, and she by a cow sired by Hubback 319 E.

No. 43.—NELLY BLY. Cow. Roan. Bred and owned by M. L. Brooks of Novi, Mich. Calved Nov. 20, 1855. Sire, Yonondio, (88 Mich. Stock Reg.)

Dam, White Lady, by imported Shipboard.
g. dam, Moss Rose by American Comet 9 A.
g. g. dam, Red Rose, bred by Thos. Weddle from one of his imported cows bred by Major Bower of Yorkshire, Eng.

No. 44.—FANCY. Cow. Roan. Owned by M. L. Brooks of Novi, Mich. Calved March 10, 1856. Sire, Usurper, a bull imported by the Livingston Association of N. Y.

Dam, Victoria, by Baltimore, to whom was awarded the 2d premium at the State Fair of Kentucky, in 1856.
g. dam, a thoroughbred cow owned by Mr. Duncan of Kentucky.

No. 44.—CARRIE. Cow. Red Roan, Bred by M. L. Brooks of Novi, Mich. Calved February 3, 1857. Sire Yonondio, (38 Mich. Stock Reg.)

Dam, White Lady, by imported Shipboard.
g. dam, Moss Rose by American Comet 9.
g. g. dam, Red Rose, bred by Thomas Weddle from one of his imported cows bred by Major Bower of Yorkshire, Eng.

No. 45.—VICTORIA. Cow. Red and White. Bred by Mr. Duncan of Kentucky and owned by M. L. Brooks of Novi, Mich. Calved April, 1858. Sired by Baltimore, a thorough bred bull to which was awarded the 2d premium at the State Fair of Kentucky in 1856. Dam, a thorough bred cow belonging to the herd of Mr. Duncan of Kentucky. Victoria was bred to Yonondio, Nov. 3. 1856.

No. 46.—PRINCE EDWARD.—No. 865 A. Bull. Red. Bred by Ambrose Stevens of Batavia, N. Y. Sold by him to Edward Belknap of Henrietta, Mich., and now the property of Michael Shoemaker of Jackson, Mich. Calved in 1852. Sired by Wolviston 1109 A. Dam, Princess 1st, by Napier, 6238 E. This cow was imported from the herd of Mr. Stephenson of Durham, England.

g. dam, Rose Ann, by Bellerophon 3119 E.
g. g. dam, Rosette, by Belvedere, 1706 E.
g. g. g. dam, Red Rose, by Waterloo, 2816 E.
g. g. g. g. dam, Moss Rose, by Baron 58 E.
g. g. g. g. g. dam, Angelina, by Phenomenon, 491 E.
g. g. g. g. g. g. dam, Anna Boleyn, by Favorite, 252 E.

- g. g. g. g. g. g. dam, Princess, by Favorite, 252.
 g. g. g. g. g. g. dam, Bright Eyes, bred by Alexander Hall, by Hubback 319 E.
 g. g. g. g. g. g. dam, Bright Eyes, by Snowdon's bull 912 E.
 g. g. g. g. g. g. dam, Beauty, by Masterman's Bull 422 E.
 g. g. g. g. g. g. dam, Duchess of Athol, by Harrison's Bull 292.
 g. g. g. g. g. g. dam, Tripes, bred by C. Pickering, by the Studley Bull, 626 E, out of a cow bred by Mr. Stephenson of Kelton, in 1789.

Since the pedigree of *Sirloin* was published last month, we have been furnished with the pedigree of his sire, *Master Bellville*, which is as follows:

MASTER BELLVILLE, 11795 E. Red Roan, imported in 1853, by the Sciota Company. Sire Bellville, 6778 E. Dam Moss Rose, by Young Matchem, 4522 E; g. dam Moss Rose, by Priam, 2452 E; g. g. dam, by Young Alexander, 2977 E; g. g. d. Dairymaid, by Pilot, 496 E. Master Bellville brought \$2210 when sold at the sale of the company.

Book Notices.

TRIP THROUGH THE LAKES.—G. Disturnell of New York, has just published a very neat volume containing a great deal of historical and statistical information, relating to the American Lakes, together with the details necessary to render a trip down the St. Lawrence interesting and instructive. This volume comes out in good time for the summer travel. The volume is illustrated by maps and engravings, the former of which are peculiarly valuable in a work of this kind. S. B. Howe of Detroit has the work for sale.

THE MANUAL OF BOTANY.—Dr. Asa Gray, Professor of Natural History in Harvard University, has issued a valuable, cheap, and useful book, entitled "Manual of Botany of the Northern United States." This Manual gives a very complete description of the several orders of plants indigenous to the Northern States, and is the most useful book for reference that we know. This work taken in connection with the author's "First Lessons," and his text book, form a series which no Student of Botany in this country can do without. They are published by Messrs. Ivison & Phinney of New York, and by Messrs. Raymond & Selleck of Detroit.

SANDERS SCHOOL SPEAKER.—Under all democratic forms of government oratory has held an important position as an art. The advance and progress of education, in the United States, constantly demands that works of education, and especially books intended for class books of oratory shall be such as will keep up with the times and the public wants. This new publication is one eminently intended to impart upright ideas, and to inculcate that correct maxim that an orator must in some degree represent what he endeavors to inculcate, and that to be a great and influential orator, the individual must be a good and virtuous man. The work will be found most useful in schools, both for teacher and pupil. It is published by Ivison & Phinney of New York, and by Raymond & Selleck of Detroit.

TURKEY AND THE TURKS.—An epitome of a diary kept by J. V. E. Smith, author of several Pilgrimages in the Orient. The call for this work has been such that a second edition has been issued. It is published by Messrs. James French & Co., and is for sale by Raymond & Selleck of Detroit.

INCIDENTS ON LAND AND SEA.—The record of five years residence on the Pacific coast, and is written by Mrs. D. B. Bates, the wife of the captain of the *Nonantum*, a vessel that took fire and was burned while on her voyage out. The work presents facts and incidents of remarkable interest, though the style is occasionally inflated. Published by J. French & Co., of Boston. For sale by Raymond & Selleck of Detroit.

PORTER'S SPIRIT.—We now receive Porter's Spirit with great regularity. His "Spirit" has become one of the most excellent of papers, and in regard to all matters connected with the turf, with fishing, hunting, and sporting, it is the authority. Its literary contents and illustrations are likewise very high toned, and we see by the quotations it occasionally makes from us that the "Tall Son of

York" appreciates our labors. We reciprocate, and most cordially endorse the Spirit, as being fully endowed with the "breath of life," and at all times ready to infuse it into others at the rate of \$3 per annum.

EVERY MAN HIS OWN FARRIER.—This is the title of a work on the horse, reprinted and published by Messrs. Edwd and Wm. Wallington, and sold by them. It is an exact copy of the English work and is one of the most useful "vade mecum," of the veterinary practitioner. The work gives brief descriptions of the symptoms of the diseases of horses, following each disease with its own recipes, which are given with great exactness. We consider the book a most useful one. It is very neatly printed and bound, and does great credit so the printers of Ann Arbor.

The Quarterly Cosmopolitan Art Journal is fast becoming a most agreeable periodical. The last number has some illustrations most beautifully engraved and worked, and a very charming poem from T. B. Aldrich, the poet and artist. The journal is sent to all who subscribe as members of the association.

There are now seventy entries of various kinds for the trial of harvesting tools and machines at Syracuse.

DEATH OF A BLACK HAWK STALLION.—John Letts, Esq. of Dowagiac, who brought from Vermont, during the spring, a very fine stallion named Young Black Hawk, has had the misfortune to lose this horse, owing to the effects of a kick. The Cass Co. Tribune states that Young Black Hawk was three years old, and considered worth \$1500.

The Eaton Republican states that a subscription is on foot to raise money to fit up a first rate trotting course on the fair grounds of that county. The taste for good horses is not to be crowded out. Only keep it within proper bounds, and it will be right and profitable.

FOR SALE.—The Bull Prince, noticed in the article describing the stock now owned at Coldwater, as a son of of Haymaker by Shaker Lady, is for sale. He is entered in the American Herd Book vol 8. as No. 2062. Prince is a valuable animal to those who desire to raise good milk stock. The young bull Baron Balco, No. 1328 of vol. 3 American Herd Book, is likewise for sale. We do not hesitate to commend both these animals to the attention of stock breeders, especially the latter, which is one of the best bull calves we have ever put hands upon. Mr. A. C. Fiske of Coldwater likewise offers his horse Hero for sale.

We are prepared to give answer to all inquiries which may be made respecting price, pedigree and other particulars about any of the above named animals.

MR. MUIR'S CHALLENGE.—We received at a late date in May, a communication relative to the challenge advertised by Mr. Muir in our advertising pages. We declined to publish it because it was neither an acceptance, nor did it make any counter proposal, and also because in publishing it we should have been obliged to enter upon another interminable horse controversy. Our advertising pages are open to all, while they keep within the bounds of respectful language; and in them our friends will find the most extensive opening in the State for making known the merits of their horses. The communication contained one good suggestion, however, which ought not to be lost sight of, and that is that Cossack should be put on the same footing at the State Fair as all other horses, and when he excels them there, then let him cast down the glove. We have one other suggestion to make, still better, let him bring out his colts to show of what they are made. This is the true test. Bear in mind that out of all the horses which are winners of the most famous prizes, on the turf, there is not more than one in five hundred of them that ever produced a race of colts as good as themselves or was in any way good as stock getters.

BEAT THIS WHO CAN.—In February 1856, I bought of J. D. Patterson, of Westfield, New York, five full Blood French Merino ewes for which I paid \$1000, or \$230 each. Last year they sheared sixty-three pounds of clean unwashed fine wool, and four of them had seven lambs.

This year the five old ewes and six yearlings sheared, one hundred and thirty-five pounds of clean unwashed fine wool, and five ewes raised nine lambs, very large and fine. Making sixteen lambs in about twelve months from the five ewes. I would not now sell the ewes for the price I paid for them.

JOHN H. KRAGLE.

Allen, Hillsdale Co., June 15th, 1857.

The Crops, Wool and the Markets.

At the present moment, the 29th, all accounts which have reached us state that there never was a better prospect of a very full crop of wheat. It is generally admitted that hay and harvest will be a fortnight later than usual. The frequent rains for the past two months have retarded the planting of the corn fields, and in some places where the land was intended for corn, the seed is not yet in the ground. This spring has been severe upon the low lands intended for plowed crops. Oats and barley promise well every where. From present indications there will be little decline in prices for some time after harvest. Flour here bears such a price that it pays better to keep it here than to ship. There is considerable in store. No wheat is coming in of any consequence, and the old crop is considered pretty well exhausted. For this reason little indication is as yet given that the full harvest will bring down prices. The crops in Great Britain are stated to be in remarkably good condition, and promise well, but the market reports do not speak of any decline, or that there will be less wanted from this country than usual. The market for beef mutton pork and live stock continues to keep steady at high rates, and farmers should bear this in mind in making preparation for saving fodder for next winter. In New York even with the spring and summer supply of fruits and vegetables, there has not been the slightest decline in the prices of live stock, with a full supply at the cattle yards.

The wool market is not fully supplied. Shearing is so much later than usual, that but few of the large clips have as yet been offered. In Great Britain we note that the large supplies from Australia have caused a slight decline but we look here for an advance in rates as soon as the excitement attendant upon the wool clip season is over. With the first of the present month the new tariff goes into effect, and it will undoubtedly throw a large supply of foreign goods on the market immediately, at less rates by 6 per cent than heretofore. This will scare manufacturers for a time, and we shall hear the usual groans on the melancholy state of things which will not permit them to pay more for wool than they can now afford, although they would like to do so. Meanwhile, we will note the effect of the introduction of coarse wools duty free upon the manufacturing interests from time to time. The quotations in Detroit, New York and Boston are as follows:

	N. Y.	Bost.	Det.
Saxon and the finest Merino fleeces	60 @ 65	62 @ 66	
Full Blood Merino	52 @ 56	55 @ 50	45 @ 50
½ and ¾ blood	46 @ 50	46 @ 52	38 @ 44
American grades	38 @ 45	40 @ 46	30 @ 35

BREADSTUFFS AND GRAIN.

Flour, bbl.	\$7.50 a 8.00	Clover per bush.	\$7.50 a 8.00
Cornmeal, 100 lbs.	1.87½ a 2.00	Timothy,	3.50 a 4.00
Buckwheat, 100 lbs.	1.50 a 1.75	Red top,	3.00 a 3.50
Wheat, bush.	1.60 a 1.70	Blue, grass,	1.75 a 2.00
Corn, bush.	0.68 a 0.70	Orchard grass,	3.00 a 3.50
Oats, bush.	0.47 a 0.50	Sandusky plaster, bbl.	1.25 a 1.50
Barley, per 100 lbs.	2.50 a 2.60	Grand River,	1.50 a 1.75
		N Y Plaster,	1.13 a 1.25
		Sandusky water lime,	1.50 a 1.75
		N Y do.	1.31 a 1.50
		Salt fine bbl.	1.75 a 2.00
		do coarse,	2.25 a 2.50
		MISCELLANEOUS.	
		Apples per bush.	1.00 a 1.25
		White fish, half bbl.	5.50 a 5.75
		White beans per bush.	2.00 a 2.25
		00 Sheep pelts,	2.00 a 2.25
		Hay, timothy, ton,	14.00 a 16.00
		Common,	12.00 a 14.00
		Honey,	20 a 25
		Potatoes,	0.70 a 0.75

C. P. Benton, Esq., is the agent of the Farmer at Coldwater. R. S. Gage, Esq., has taken hold of the agency at Kalamazoo.

Mich. Southern & North. Indiana Railroad.

1857 Summer Arrangement. 1857

FIVE DAILY PASSENGER TRAINS,

Going West.

Laporte Mail—Leaves Toledo Daily, Sundays excepted, at 6.45 a. m., stops at all stations.

Lightning Express—Leaves Toledo daily, Sundays excepted, at 9.20 a. m., stops at Adrian, Hudson, Hillsdale, Jonesville, Coldwater, Sturgis, White Pigeon, Elkhart, Southbend, Laporte, N. A. & S. R. R. Crossing, Calumet, and Chicago Junction.

Steamboat Express—Leaves Toledo Daily, Sundays excepted, at 2.30 p. m., makes Light'g Express stops, and Mishawaka.

Night Mail—Leaves Toledo Daily, Sundays and Saturdays excepted, at 8.25 p. m., stops at all stations.

Night Express—Leaves Toledo daily, at 10.40 p. m., makes Express stops east of White Pigeon, and all stops west.

Going East.

Laporte Accom.—Leaves Laporte daily, Sundays excepted, at 3.25 a. m., stops at all stations.

Telegraph & Steamboat Express—Leaves Chicago daily, Sundays excepted, at 6.15 a. m., stops at Chicago Junction, Laporte, South Bend, Elkhart, White Pigeon, Coldwater, Hillsdale, and Adrian.

New-York Express—Leaves Chicago daily, Sundays excepted, at 7.40 a. m., makes Steamboat Express stops.

Mail—Leaves Chicago daily, Sundays and Saturdays excepted at 3 p. m., stops at all stations.

Night Express—Leaves Chicago daily at 10 p. m., stops at all stations.

BRANCH TRAINS.

Air Line—Leave Toledo at 9.50 a. m., and Goshen at 8.15 a. m. for Elkhart. Leave Elkhart at 9.40 a. m. for Toledo, and 7.35 for Goshen.

Jackson—Leave Adrian at 8.50 a. m. and 3.50 p. m. Leave Napoleon at 10.50 a. m. and 5.50 p. m.

Three Rivers—Leave White Pigeon at 1.55 and 8.35 p. m. Leave Three Rivers at 8.45 and 5.30 p. m.

Goshen, Napoleon and Three River Trains connect with Steamboat trains each way.

Detroit—Leave Detroit at 7.10 a. m., connecting with Lightning Express, and Telegraph and Steamboat Express; at 4.30 p. m. connecting with Night Mail and Mail. Leave Adrian at 8.45 a. m. on arrival of Laporte Mail; at 3.45 p. m. on arrival of N. Y. Express and Steamboat Express.

Trains on branches stop at all stations. At Toledo and White Pigeon trains stop for meals.

The Telegraph and Steamboat Express and Laporte Accommodation trains connect with the Company's magnificent Steamers on Lake Erie, one of which will leave the Company's dock at Toledo at 2 p. m. for Buffalo, where they connect with the morning Express trains on the New-York Central and Y. & Erie R.R.s.

All trains connect at Toledo with trains for Pittsburgh, Baltimore, Philadelphia, New-York, Buffalo Albany, and Boston, and all other points east and south, via Lakeshore Railroad; at Detroit with trains on the Great Western, Detroit and Milwaukee, and Michigan Central Railroads; at New Albany and Salem R. R. Crossing with New Albany and Salem Railroad for Michigan City, and all points south; at Chicago Junction, with trains on Rock Island and Chicago, Alton and St. Louis Railroads; at Chicago with all the trains running west, north and south.

Toledo, June 15, 1857.

SAM. BROWN, Gen'l Sup't.

To Canvassers and Readers.

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TO MARRIED LADIES

It is peculiarly suited. It will in a short time bring on the monthly period with regularity.

Each bottle, price One Dollar, bears the Government Stamp of Great Britain, to prevent counterfeits.

CAUTION.

These Pills should not be taken by females that are pregnant, during the first three months, as they are sure to bring on miscarriage; but as every other time and in every other case, they are perfectly safe.

In all cases of Nervous and Spinal Affections, Pains in the back and limbs, Heaviness, Fatigue on Slight Exertion, Palpitation of the Heart, Lowness of Spirits, Hysterics, Sick Headache, Whites, and all the painful disorders occasioned by a disordered system, these Pills will effect a cure when all other means have failed, and although a powerful remedy, do not contain iron, calomel, antimony, or any thing hurtful to the constitution.

Full directions accompany each package.

Sole Agents for the United States and Canada,

JOB MOSES,
(Late I. C. Baldwin & Co.)
Rochester, N. Y.

N. F.—\$1.00 and 6 postage stamps enclosed to and any authorized Agent, will ensure a bottle of the Pills by return mail.

For sale in Detroit by J. S. CUTHBERT & CO., FARRAND & WHEA'ON, T. & J. HINCHMAN, GEORGE B. DICKENSON & CO., E. C. TERRY, and in one Druggist Store in every town in the United States. April 1st, 1857. 6m

H. F. MANN'S**GREAT WESTERN IRON MOWER.**

Patented June 3, 1856.

**FARMERS**

Do you Want the best mower!!

Get H. F. Mann's

GREAT WESTERN IRON MOWER!

Do you want a mower compact and simple in its construction—durable and not liable to get out of repair?

Get the

GREAT WESTERN IRON MOWER!

Do you want a mower that is of a light draft for two horses?

Get the

Great Western Iron Mower!

Do you want the best Mower ever invented, for the least money?

Buy

H. F. Mann's Great Western Iron Mower!

The frame work is wrought iron—the driving wheel is four feet in diameter. It is furnished with two sickles, one smooth and one serrated edge, with three extra sections for each, either of which may be used as the grass to be cut may require. There will also be three extra guards, and one extra small penion furnished.

Cash price, \$100

Half cash and half in six months, - 110

TEN DOLLARS should accompany the order.

The usual warranties on each machine.

Any further information cheerfully and promptly given on application. Persons ordering machines, should give plain directions for shipping.

Address **H. F. MANN.**

Orders received for J. J. MANN & SON'S Self-raking Reaper and Mower combined, manufactured at this place. may, 4ms.

DOCTOR HOOFLAND'S

CELEBRATED

GERMAN BITTERS,

PREPARED BY

Dr. C. M. JACKSON, Philad'a, Pa.

WILL EFFECTUALLY CURE

LIVER COMPLAINT, DYSPEPSIA, JAUNDICE,
Chronic or Nervous Debility, Diseases of the Kidneys, and all diseases arising from a disordered Liver or Stomach.

Such

as Constipation,

Head, Acidity of the Stomach,

Nausea, Heartburn, Disgust for Food,

Fullness or weight in the stomach, Sour

Eructations, Sinking or Fluttering at the pit of

the Stomach, Swimming of the Head, Hurried and difficult

Breathing, Fluttering at the Heart, Choking or suffocating

sensations when in a lying posture, Dimness of Vision, Dots

of webs before the Sight, Fever and Dull Pain in the Head,

Deficiency of Perspiration, Yellowness of the Skin, and

Eyes, Pain in the Side, Back, Chest, Limbs, &c.

Sudden Flushes of Heat, Burning in the

Flesh, Constant Imaginings of

Evil and great Depression of

Spirits.

The proprietor is calling the attention of the public to this preparation, does so with a feeling of the utmost confidence in its virtues and adaptation to the disease for which it is recommended.

It is no new and untried article but one that has stood the test for ten years' trial before the American people, and its reputation and sale is unrivalled by any similar preparations extant. The testimony in its favor given by the most prominent and well known Physicians and individuals in all parts of the country is immense and a careful perusal of the Almanac, published annually by the proprietor, and to be had gratis of any of his Agents, cannot but satisfy the most skeptical that this remedy is truly deserving the great celebrity it has obtained. Principal Office and Manufactory. No. 96 Arch St., Philadelphia, Pa.

GREAT CURE OF PILES.

CAMDEN, N. J., March 12, 1856.

DEAR SIR—It is with much pleasure I take this opportunity of informing you of the great benefit I have derived from the use of a few bottles of "Hooiland's German Bitters." For a number of years I have been sorely and severely afflicted with pain in the stomach, attended by attacks of the Piles, for which I tried a great many remedies, but without affording me any relief. Being advised to use the German Bitters, I did so, using in connection for the Piles, your Spikenard Ointment, and I now inform you that they have entirely cured me and resorted me to health, and I would advise all the afflicted to use your valuable medicines, &c.

Respectfully yours, MARGARET REPSHER.

No. 45 Plum Street, Camden, N. J.

Dr. C. M. Jackson, Philadelphia.

For sale by druggists and storekeepers in every town and village in the U. S. and Canada.

Dec. 1856.—1 year.

Life, Fire & Marine Insurance Agencies.

Indemnity to Millions!!

WESTERN FARMERS' MUTUAL INS. CO.

AT BATAVIA, N. Y.

Incorporated by the Legislature of New-York, April 23, 1844, by a two-third vote. This company will not insure any except what is strictly Farming property.

It insures only in the States of New-York, Pennsylvania Ohio and Michigan. I also insure in other good, reliable and safe companies:

Empire Insurance Company,

Union Springs, Cayuga Co., N. Y.

Farmers' Union Insurance Company,

Athens, Bradford County, Pa.

Farmers' & Mechanics Insurance Company,

Philadelphia, Pa.

Charter Oak Life Insurance Company,

Hartford, Conn.

City Insurance Company,

Cleveland, Ohio.

Special attention is given to the Insurance of Farm property, Dwelling and out buildings. I insure such buildings in a very favorable manner, for one, two, three, four or five years.

I am also agent to receive and solicit subscriptions for the Michigan Farmer, and for the Cyclopaedia of Modern Travel, by Bayard Taylor, the Michigan State Directory, Preston's Bank Note Reporter and Coin Chart Manual, the Magazine of Travel, and other papers and books of useful and entertaining knowledge.

Post office address Darien Centre, N. Y.; Erie, Pa.; Cleveland, Ohio; Pontiac, Pine Lake and Birmingham, Mich.

June 2t

E. M. STICKNEY, Travelling Agent.

HICKOK'S CIDER MILL

A entire new, enlarged and improved machine.

Price \$40.

D. O. & W. S. PENFIELD.

Sept:3t

BLOODED HORSE BLACK HAWK BEAUTY.

COST \$2,500.

WEIGHS 1158 POUNDS.

A. HEALEY, PROPRIETOR.

This Horse was purchased in November last of Ira Gray, of Waterbury, Vermont, at a cost of \$2,600, and was raised by Sylvanus Douglass, of Chittenden County, Vermont.

PEDIGREE.

Black Hawk Beauty was sired by Hill's Old Vermont Black Hawk, of Bridport, Vt, who earned for his owner over forty-seven thousand dollars without leaving his stable. His last season netted seven thousand dollars! Vermont Black Hawk was sired by Sherman Morgan; he by the original or Justin Morgan; he by True Briton; he by Morton's Traveler, [imported] among whose ancestors are found English Felipse, Flying Childers and Godolphin Arabian. The dam of True Briton was De Lancy's imported race mare.—The dam of Justin Morgan was sired by Diamond; he by the Church Horse; he by [imported] Wild Air. The dam of Sherman Morgan was imported, and a fast trotter. The dam of Vermont Black Hawk was a black mare from Lofty by Wild Air, among whose ancestors are found Godolphin Arabian, Flying Childers and Byerly Turk. The dam of Black Hawk Beauty was English Hunter, (imported.) He is half brother to the following celebrated trotters: Esham Allen, the fastest trotting stallion in the world; Lancelot, who has beaten the best time of Lady Suffolk; Black Ralph; Belle, of Saratoga; Lady Litchfield; Black Hawk Maid; Sherman Black Hawk; Ticonderoga; Lady Sherman; Prince Albert; Red Leg; Cleopatra; Nelly; Lone Star; Henry Clay; Flying Cloud; Plato; Black Hawk Chief; Champion Black Hawk; Sherman Belle; Don Juan, &c.

It will be seen by the above pedigree, that Black Hawk Beauty is descended from the best families of horses in Europe and America, and among his ancestors and near relatives are some of the fastest going stallions ever known. It is well understood that the horses known as the English Hunter, possess great style and speed, with extra powers of endurance. Old Black Hawk has been repeatedly upon the track, and was never beaten. Black Hawk Beauty trotted, when three years old, a mile in 2 52. Since then he has not been trained, owing to a wound upon the ankle.

DESCRIPTION.

Black Hawk Beauty is seven years old, is a beautiful red chestnut, fifteen and a half hands high, and weighs, in good condition 1163 pounds. In form he is long and rather rangy for the Morgan stock. He is exceedingly muscular, while his fine head, large, expressive eyes, large nostrils, long erect neck, capacious chest, round body, broad loins, short back, long and muscular quarters, deep and full flanks, broad, sinewy limbs, fine glossy coat, and large, prominent veins, give unmistakable evidence of a pure, high bred animal. In temper he exhibits gentleness. For intelligence, energy of character, ease and style of action, he has no superiors, and few if any equals. He was awarded the first premium at the last annual Fairs of Kalamazoo and Van Buren Counties, as a stallion of all work, and the first premium as foreign stock.

TERMS.

Black Hawk Beauty will be kept at the stable of E. Landon, on Water Street, directly in rear of the Burdick House, from May 1st, 1857, to July 31, 1857, which will end the season, at \$25 the season. Insurance can be effected by contract. Five dollars in all cases to be paid when the service is rendered. Mares from a distance furnished good pasturage, and all reasonable attention given them. But accidents or escapes must be at the risk of owners.

Kalamazoo, Mich.

A. HEALEY.

STEEL CULTIVATOR TEETH.

THE subscriber having purchased the exclusive right of manufacturing and vending **D. B. ROGERS' Improved Steel Cultivator Teeth**, throughout the north half of the State of Indiana and all the State of Michigan, except the counties of Oakland, Lapeer, Genesee, Calhoun, Kalamazoo, and Hillsdale, now offers to supply his district with said Teeth, made of the best quality of spring steel, and in the latest improved shape.

These Teeth are too well known to need any certificates of their usefulness. They have taken the first premium at every State and County Fair wherever exhibited.

For sale in every principal city and village throughout the above named district.

The subscriber has also purchased the exclusive right of manufacturing and vending **D. B. ROGERS' IMPROVEMENT IN THE WHEEL CULTIVATOR**, throughout most of the States of Michigan and Indiana. At the Michigan State Fairs in 1853 and 1854, he exhibited one of these Machines, fitted with steel teeth, and received the first premium and a diploma. This Machine, fitted with Rogers' improved steel teeth, is considered by all farmers who have used them, to be the best Wheel Cultivator in use, not only for preparing summer fallows and putting in grain, but for the cultivation of corn when planted in drills.

No farmer will dispense with the use of the above named farming implements who has any knowledge of their usefulness.

All orders for Wheel Cultivators, or Cultivator Teeth, filled on short notice.

CAUTION.—All persons are prohibited the use of these Teeth and Machines, in said district, unless purchased of the subscriber or his duly authorized Agents. Address,

April 1, 1856.

T. A. FLOWER,
PONTIAC, MICH.

1857. **FARMER'S WAREHOUSE.** 1857
BURNHAMS & BURRALL,

Dealers in all kinds of Agricultural Implements, Garden and Field Seeds, Salt, Plaster and Water Lime.
Warehouse near Railroad Depot, BATTLE CREEK, MICH. [oct-12]

A. GILMORE'S

PATENT BEE HOUSE AND HIVE:

PATENTED JUNE 5TH, 1849.

THE subscriber having purchased the right of GILMORE'S BEE HOUSE AND HIVE for the counties of

WAYNE, OAKLAND, AND MACOMB,

is now prepared to sell

INDIVIDUAL RIGHTS

with a book of instructions for building House and Hive, and the management of bees, for five dollars.

A liberal discount to clubs for town rights.

The plates and descriptions are plain, giving the length, width, and thickness of each piece of timber, so that any carpenter can build the house and hive from the book. With this Bee House and Hive, any individual can have the bees perfectly under his control, and obtain the surplus honey without the destruction of the bees.

A. M. BODWELL.

Ann Arbor, March 20, 1856.

N. B. Agents wanted for selling right in every town in the above counties. April 1st

HENRY E. BOWNER.

WOOD ENGRAVER.

No. 139 Jefferson Avenue, Michigan Farmer Office.

DETROIT, MICH.

Engravings of Agricultural Implements, Views of Buildings, Animal Portraiture, Machinery, Vignettes, Bill Heads, Business Cards, Stamps, Seals, &c., &c. done on the shortest notice and in the best styles of the art, at New York charges.

P. O. address, Box 797.

dec-12.

BROOM CORN SEED, King Phillip, Flower, Early Dutton and other varieties of SEED CORN, at
feb 6m
PENFIELDS,
103 Woodward avenue.

GREEN MOUNTAIN BLACK-HAWK,

Winner of the Sweepstakes Premium at the Michigan State Fair in 1854!

Also the first premium at the Branch County Fair in 1854, as a horse of all work, and in 1855 as the best stallion for speed. He was also awarded the first premium by the State Society in 1855, as the best horse of all work. At the last State Fair he was awarded a diploma as first premium in the list open to the world to compete.

When 3 years old he trotted for a premium in Addison County, Vermont, winning with ease in 3-10.

In August, 1856, he won a premium of \$100 on the Coldwater trotting course, making the third mile in 2.53, when very fat and out of condition.

He trotted last summer without preparation, and during his season in 2.47.

PEDIGREE.

Green Mountain Black-Hawk

Will be seven years old in July, is a beautiful dark chestnut, sixteen han's high, and weighs over 1100 pounds; he was bred in Addison county, Vermont, and sired by Sherman Black Hawk, who trotted at the National Show in Boston in the fall of '55, in 2.35; he by Hill's Black Hawk, who was by Sherman Morgan; he by the original or Justin Morgan, by True Briton; he by Morton Traveler, (imported); he by the celebrated O'Kelly or English Eclipse; he by King Herod; by Blank; by Old Cade. King Herod was by Tartar, his dam Cyron, by Blaze, a son of the great Flying Childers; Blank was by Godolphin Arabian; Justin Morgan's dam was by Diamond; he by the Church horse; he by imported Wildair. The dam of Black Hawk was a large black mare from Lofly by Wildair; grandam Doll by Wildair—she was a fast trotter. The dam of Sherman Morgan was imported and a fast trotter; Sherman Black Hawk's dam was by Messenger, Leonidas and Bellfounder. The dam of Green Mountain Black Hawk was got by Gifford Morgan; he by Burbank, who was the original or Justin Morgan. Grandam was a Morgan mare so posed to be by Sherman Morgan.

It will be seen by the above pedigree, that GREEN MOUNTAIN BLACK HAWK possesses the original Morgan blood in such purity as is seldom found at the present day, and descended through two of his best sons, Sherman and Burbank.

He combines size, style, beauty, speed and action in perfection, very rarely found in one horse; among his ancestors are numbered the best trotting stallions ever known.

As a stockgetter he has more than met the expectations of his warmest admirers. Specimens of which it will give me pleasure to show at any time.

GREEN MOUNTAIN BLACK HAWK

Will be kept on my farm in COLDWATER, during the present season, *except the month of July*, during which month he will be kept at the city of **GRAND RAPIDS**.

TERMS:—\$20 FOR THE SEASON, AND \$25 TO INSURE A COLT.

♂ Mares from a distance will be provided with good care and pasturage.
Coldwater, March, 1857.

my.3t
F. V. SMITH.

SPLENDID FARM

FOR SALE or TO RENT!
NEAR MACKINAC.

THE subscriber hereby offers for sale or to rent his farm consisting of 714 acres, situated about 12 miles from Mackinaw. Three hundred acres of this land is prairie or meadow, growing large crops of blue grass and Timothy, suitable for hay. Besides this there are from 50 to 100 acres that has been or is now under the plow. If the purchaser choose he can have a large stock of cattle, implements, and all the material necessary to make the land profitable. For particulars, apply to J. J. Kuhn, corner Monroe ave. and Farmer st., Detroit.

P. S.—This farm also possesses a fine fishery, and can be approached by vessels of large size at several places. Mackinaw affords one of the best markets in Michigan for all farm produce. The climate is mild. The farm sells at a bargain, on reasonable terms of payment.

This farm and stock, will be sold at the very low price of \$4,000 if applied for before the first of June. This is a

GREAT BARGAIN.

The fishing stations alone are worth half the price asked.

For further information apply to

apr 3t
R. F. JOHNSTONE,
Editor of the Mich. Farmer.

THE EYES! THE EYES!!

DR. H. BIGELOW, OCULIST,

(Office Room No. 9 Sheldon Block opposite the Peninsular Bank, Jefferson ave., Detroit, Mich.)

Respectfully announces to the public generally that he is now engaged in treating the various diseases of the Eye, with much success. Many Certificates and recommendations might here be given, but such things are so common at this day, that it is deemed sufficient merely to say to those afflicted, come and SEE, a treatment is the same as that practiced by the late Dr. BEER, H g^o ow.
Bt
May, '57lyr.

ATTENTION FARMERS!!

ALL those who want a good article of Cloth or Flannel manufactured for their own use, will do well to take their

WOOL

— TO —

CORNWELL'S FACTORY,

Ann Arbor, Mich.

We have been adding *New Machinery* to our establishment, and with our long experience in the business, we feel confident that we can give entire satisfaction.

OUR PRICES ARE:

One half of the cloth we can make from the wool; or

We manufacture wool as follows:

For Cassimeres,	3s. per yard.
White Flannel, 2 yards wide,	3s. per yard.
Do. do. 1 yard wide,	1s. 6d. "
Madder red Flannel, fast colors,	30d. "
Wine and Pressed Flannel,	2s. "

♂ Wool sent by railroad will be promptly attended to. All work warrant d well done, and ready when promised, or all damages paid prompt.

A large Stock of Cloths and Flannels on hand,

To exchange for Wool on reasonable terms.

CORNWELL & BROTHER.

Ann Arbor, May, 1857.

June 6t

TRAVELLING AGENTS WANTED.

WANTED an honest, industrious man in each section of the State, to travel and take orders from samples for MC'ALLISTER'S HOMOEOPATHIC REMEDIES.

A liberal Salary and a fair commission will be paid. Apply to, or Address (with return postage.)

DR. J. S. MCALLISTER,

Jersey City, N. J.

THOROUGH DRAINING !!*Is the foundation of all improvement in farming !***THE CHEAPEST AND BEST****TILE MACHINE****in the world !****DAINES'****AMERICAN DRAIN TILE MAKER****HAS BEEN AWARDED FIFTEEN FIRST PREMIUMS,
at State and County Fairs.**

THE TILE MACHINE invented and patented by JOHN DAINES of Birmingham, Oakland County, Michigan, is now being manufactured in the most thorough manner, and is offered to the farming community as the

cheapest, most labor-saving, and most complete

invention, and enabling farmers to make their own tiles, that has yet been put before the Agriculturists of the United States.

These machines are made of iron, are easily worked, any man being able to manufacture a first rate article after a few hours practice. They cost delivered in Detroit only \$110. They have two dies, for three and four inch tile; and extra dies, to accompany the machine cost \$3.00 each. These machines will manufacture per day according to the force employed, from

150 to 250 rods of horseshoe or pipe tile.

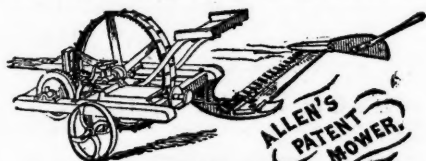
The machine weighs but 500 pounds, and can be packed and sent to any part of the United States, or to foreign countries, as easily as a piano.

With this machine any farmer who has a fair quality of clay on his farm, can manufacture his own tiles at a cheap rate, and easily save the price of the machine by avoiding the cost of transportation. The machine when in operation, takes up no more room than an ordinary sized kitchen table; it may be worked by two or three men as may be found most convenient and economical, or a man and two boys can keep it in full operation:

For simplicity, durability, economy, cheapness, and amount of work, this Tile Maker challenges the world !

At the present time when thorough draining has become a necessity on alluvial lands, it offers the simplest and cheapest means of furnishing farmers with a draining material far superior to any other material now used for that purpose.

Applications for these machines may be addressed to

JOHN DAINES,**Birmingham, Mich.****or to R. F. JOHNSTONE,****130 Jefferson Avenue, Detroit.****The Best Mowing Machine in the World !!!****ALLEN'S
PATENT IMPROVED****MOWING MACHINE,****AND
COMBINED MOWER. AND REAPER,****Strong, simple in construction, not liable to get out
of order,****COMPACT, LIGHT, EASY OF DRAFT,****PERFECTLY SAFE TO THE DRIVER****MAY BE WORKED AT A SLOW GAIT BY****Horses or Oxen.****No Clogging of Knives;**

Works well on rough ground, also on side hills, salt and fresh meadows, and in any kind of lodged grass and clover.

Warranted to give entire satisfaction.

*Manufactured at the Agricultural Implement Manufactory
and sold at the Warehouse and Seedstore of*

R. L. ALLEN, 189 & 191 WATER St., N. Y.**One Dollar a year, Circulation over 100,000 copies weekly.****25 WITNESSES,**

OR THE

FORGER CONVICTED.**JOHN S. DYE IS THE AUTHOR.**

Who has had ten years' experience as a Banker, and Publisher and Author of a *Series of Lectures at the Broadway Tabernacle* When for ten successive nights, over

50,000 PEOPLE

Greeted him with rounds of applause, while he exhibited the manner in which counterfeiters execute their Frauds, and the surest and shortest means of detecting them.

**THE BANKNOTE ENGRAVERS ALL SAY HE IS THE
GREATEST JUDGE OF PAPER MONEY LIVING.**

**GREATEST DISCOVERY OF THE PRE-
SENT CENTURY****For detecting counterfeit Bank Notes.**

Describing every genuine bill in existence, and exhibiting at a glance every counterfeit in circulation; Arranged so admirably that reference is *easy and Detection instantaneous.* No Index to examine! No pages to hunt up! But so simplified and arranged, that the Merchant, Banker and Business Man can see *all at a glance.*

English, French, and German.

Thus each may read the name in his own Native tongue,

Most perfect Bank note List Published.

Also a List of

**ALL THE PRIVATE BANKERS IN
AMERICA.**

A complete Summary of the Finance of Europe and America will be published in each edition, together with all the important news of the day. Also,

A SERIES OF TALES

From an old manuscript found in the East. It furnishes the most complete history of

ORIENTAL LIFE,

Describing the most perplexing positions in which the Ladies and Gentlemen of that country have been so often found. These stories will continue throughout the whole year, and will prove the most entertaining ever offered to the public.

Furnished weekly to subscribers at ONE DOLLAR a year
All Letters must be addressed to

JOHN S DYE, Broker.

Publisher and Proprietor, 70 Wall-street, New York.
May 1 yr pay gr.

IMPORTED, STOCK viz : Durham Cattle, Jacks, Jennets and Mules, South Down Sheep, and Chester White Pigs, constantly on hand and for sale. **SETH A. BUSHNELL.**
Hartford, Trumbull Co., Ohio, March 19, 1857. *apd*

SEEDS! SEEDS! SEEDS !

THE Subscribers have on hand and for sale at wholesale and retail, a large and complete assortment of Garden, Flower and Field Seeds, obtained from the most reliable sources, both in this country and Europe. New, good and true to their marks. Farmers, gardeners and others in want of Seeds of almost any kind, can obtain from us those that will give entire satisfaction.

Catalogues may be had on application at our house, 165 Woodward avenue, or by mail. **M. T. GARDNER & CO.**
Detroit, Feb. 1st 57. *mrft*

P L O W S .

800 PLOWS, of all makes. Starbuck, Eagle, Steel and sub soil. Cultivators and Seed Drills. **D. O & W. S. PENFIELD,**
ad Agricultural Warehouse.

KETCHUM'S MOWER & REAPER.

Price of combined machine complete, \$130 00

Price of Mower alone, 110 00

With cost of transportation from Buffalo to Detroit.

On hand and for sale by **D. O. & W. S. PENFIELD**, at their agricultural Warehouse, 163 Woodward Avenue, Detroit.

*Also a full assortment of Harvesting tools, Horse-rakes, Cradle
Scythes, &c., &c.* *jj2m.*

1857. The Fast Trotting Stallion, 1857.

COSSACK,

Will stand this season, commencing on the 27th of April, and ending July 11th, and will be limited to 35 mares only, at the following places:

Mondays, Tuesdays, and Wednesdays, at Stuart's Hotel, Hartland Centre, Livingston County.
Thursdays, Fridays and Saturdays, at E. Merrill's American Hotel, Fentonville, Genesee County.

Good pasturage for mares coming from a distance will be furnished on reasonable terms, and my personal care will be given them: but all accidents and escapes must be at the risk of the owner.

TERMS.

\$15 for the Season, and \$20 to insure a mare with foal.

Season money will be due July 11th, and insurance money as soon as the mare is known to be with foal. Owners of mares not regularly returned to the horse, or owners parting with them before time of foaling, will be held responsible for the insurance money.

COSSACK

Is five years old this spring, is a light chestnut, stands fifteen and a half hands high, is just in his proportions, and weighs over one thousand pounds. His powers of endurance are extraordinary, and he possesses a temper which enables any boy to handle him. He is perfectly sound and free from vice. The sire of Cossack trotted in harness, twice around a half mile track in 2.44, at the Provincial Show at Hamilton, C. W., after having covered 100 mares the previous season. The winter following he trotted on the ice, at the same place for a purse of \$100, against the State of Maine and five others, beating them in 2.37 and 2.38. He also sired Silver Tail, Butcher Boy, Queen City, Poscora, and many other fast trotters. Silver Tail often trotted in public from 2.40 to 2.45. Her last match was at Buffalo, when she trotted mile heats, beat 3 in 5 to a wagon, beating a horse owned by Albert Lacy and Trifle, in 2.44, 2.43, and 2.42. Queen City, as above mentioned, was also got by the sire of Cossack, and was bought by Geo. Metzker of Buffalo, she having shown him when purchased 2.37. She was also matched against a tried horse to trot a match of ten miles over the Coldspring course, Buffalo, and beat him with ease in 30 min. 5 seconds.

PEDIGREE OF COSSACK.

COSSACK was got by Warrior; he by Cœur de Leon, bred by Mr. Blackwell of St. Thomas; Cœur de Leon by a fast trotting stallion owned at Toronto, C. W., out of a mare by Bush Messenger, that could trot in 2.50.

Cossack's dam was got by a son of Old Sir Henry, that ran the match with American Eclipse; her dam was by Foxhunter. The dam of Cossack trotted over the London track, C. W., after a train of three weeks only, in 3.03!

[Certified by Austin Doty, and Dr. McKenzie.]

Challenge for \$200 a side!!

I propose to match the trotting stallion COSSACK.

TWO MILE HEATS—Against any Trotting Stallion owned in the State of Michigan,

That stands this season for mares. The horses to go as they please, over the Detroit Course, during the week succeeding the State Fair. The match to come off on a fair day, when the track is in good condition. This challenge will remain open till July 5th; the stakes to be deposited in the hands of R. F. Johnstone, Esq. or H. R. Andrews, Esq. of Detroit, on the first day of August. No forfeit—Play or pay.

As several Vermont Black Hawk Trotting Stallions have been brought, within the two past years, very prominently before the public, the attention of their owners is respectfully invited to the above challenge.

Howell, April 13, 1857.

JOHN MUIR.

Letters addressed to me at Howell, Fentonville, or Hartland Centre, will be promptly answered on receipt of the same.—J.M.

FRANK.

THIS Young Horse is five years old the fifth day of May, next; is black, 16 hands high, and from 1100 to 1200 pounds in weight—fine proportion and heavy muscle—well calculated for road, track or saddle.

PEDIGREE.—Frank was sired by Olcott Oscar, who was awarded the first premium at the Michigan state Fair at Ann Arbor, in 1850, and also first premium at the New York State Fair in Saratoga, in 1853, in foreign class, and premium at the National Fair at Springfield, Mass., the same Fall. Oscar trotted on the Cambridge course, in Fall of 1853, inside 3 minutes the turn round the track without fit or train.

Oscar was sired by the celebrated Ran horse, Oscar, who was imported into Tennessee in 1829; his dam by Messenger's Ducroc; he by Wilks' Wonder. Frank's dam was a get of a son of Andrew Jackson; her dam a full blood Lower Canada Mare, of great strength and action; his colts have proved very fine.

Said Horse is the property of the subscriber, bred by himself, and can be seen at his stable in Jefferson, 3 miles west of Brooklyn, Jackson County, Mich.

March 1st, 1857.

F. J. RANDALL, Proprietor.

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Feb 1st

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